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Some 1,005 eleventh-grade students in three high schools were administered the Career Choice Questionnaire, the Occupational Orientation Inventory, and the Edwards Personality Preference Schedule. The responses to the questionnaire were tabulated and the distribution of scores on the occupational attitudes and personality needs inventory were computed for each school. Students were also asked to indicate the level of education which their chosen occupations would require. Responses are tabulated by ethnic groups. The survey showed that girls still tend to choose those careers traditionally reserved for them. The girls also planned on fewer years of training and/or education than did the boys. The subjects generally lacked knowledge about occupations. They had little factual knowledge about the content of vocational curricula, job duties, or work conditions. They did possess some realistic information about the amount of training necessary for specific careers. The hypothesis that the students would tend to choose future careers consonant with their personality need was confirmed. The hypothesis that personal and experimental influences on career choices would be associated with ethnic background was not confirmed. A number of suggestions are made for improving vocational counseling at the high-school level. (IM)

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CONCEPTS OF CAREER FIELDS

HELD BY

ELEVENTH GRADE STUDENTS

1968

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College of Education
University of Hawaii

A Study Conducted For

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Research Coordinating Unit

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Problem: A standard procedure in the educational and vocational guidance of high school students is to request statements of their career choices. The majority of these students, however, have only vague and unrealistic concepts of careers. Their movements in social and community environments are relatively narrow, and they do not have opportunities to observe workers in business, industry, and the professions, to obtain realistic concepts of careers. Ethnic and sub-cultural influences may also be operating to limit and to bias their vocational preferences. Students' career preferences are often based on fantasies about careers, such as glamour, high pay, and freedom. Only a minority of high school graduates have reached mature decisions, based on realistic appraisals of their own interests and abilities, and on accurate perceptions of careers.

There are several theories about the development and the determinants of vocational choice. Ginzberg (1952) theorized that vocational choices evolve through three stages: fantasy, tentative, and realistic choices. The tentative stage was depicted as having three sequential phases, i.e., choices based on interests, on capacities, and on values. Super (1952) extended to this theory, adding the career establishment stage, with trial and stable phases.

Holland (1959) theorized that there are six major occupational environments on the American work scene, motoric, intellectual, supportive, conforming, persuasive and esthetic. He also postulated that there are six personality orientations corresponding to the six work environments. To support his theory Holland refers to theories of Fromm and Horney, and to studies which indicate correlations between personality traits and careers. Although it is very unlikely that six occupational environments are adequate to define the American work scene the hypothesis that vocational choices are related to personality traits has been generally supported in research.

O'Hara (1962) found some evidence to verify Ginzberg's theory that interests, capacities, and values underly tentative choices. He also

observed, however, that values may influence choices much earlier than Ginzberg hypothesized, and that students seldom relate their capacities to their eventual goal. There were still many boys who had unrealistic choices in the tentative age-stage but girls appeared to be more realistic, in a narrower range of choices.

Dole (1961) has done an extensive survey of the vocational preferences of high school students in Hawaii, relating these to their values and interests. Although he concludes that values are an important determinant of vocational choice this appears to be an interpretation from information about preferences rather than from an independent assessment of students' value systems.

Ann Roe (1956) presented an important set of hypotheses relating early-childhood experiences to attitudes, emotional needs, and other personality factors which eventually influence the individual's selection of a vocation. Although the psychoanalytic bases for her theory has not been supported, studies by Galinsky (1962), Leton (1949), Lewis (1947), and Nachmann (1960) have related vocational choices to personality characteristics. These are post-hoc studies in support of Roe's (1956) and Bordin's (1943) emotional-need theories of vocational choice. The influence of personality needs on the unrealistic and tentative career choices made during adolescence has not been adequately studied as yet.

Procedures: There were 1,005 eleventh grade students in three schools who participated in this survey: 332 students from the Kamehameha Schools; 424 students from Radford High School; 249 students from Waianae High School. These schools identified each student as above average, average, or below average. There were 434 subjects who were identified as above-average students, 409 subjects were identified as average students, and 162 subjects were identified as below-average students.

Three instruments were used in the study: a Career Choice Questionnaire (CCQ); the Occupational Orientation Inventory (OOI) (Hall, 1968); and the Edwards Personal Preference Schedule (EPPS) (Edwards, 1959). Because of scheduling difficulties, the EPPS was not administered to the students at Radford High School.

The Career Choice Questionnaire included the identification of career choices, questions about the amount of education regarded as necessary for the choices, and questions about the kinds of personal and experiential influences on their choices. The students also judged the value of various approaches for obtaining career information. A copy of the Career Choice Questionnaire is included in the Appendix.

The Occupational Orientation Inventory is an experimental questionnaire with 400 items on psychological needs and values, on worker traits, and on job characteristics. It is intended to facilitate vocational counseling through interview discussions of the student's scores on 23 scales. The twenty three scales are: Creative-Independent,

Risk High, Information-Understanding, Belongingness, Safety, Aspiration, Esteem, Self Actualization, Satisfaction, Data, Routine Independent, Thing, People, Place, Aptitude, Monetary, Physical Ability, Circum, Coworkers, Qualification, Time, Extremism and Defensiveness.

Although the author of the OOI criticizes the conventional method of using nomathetic inventories in occupational counseling, he nevertheless provides reliability statistics for the scale scores for 1400 high school students, and item differentiation for samples of high school sophmores, high school seniors, college students, and employed workers. The item differences are claimed to support the construct validity of the inventory; however, the constructs which they support are not identified. Because of the age-differences of these so-called criteria groups the construct of 'maturity of vocational orientation' might be appropriate. Such a construct could have important implications for vocational education. Further research should be done to differentiate young workers who are vocationally immature from those who are vocationally mature and to seek correlates in job stability, job satisfaction or other behavioral evidences of maturity. A certain level of vocational maturity might also be expected prior to students' entry into vocational curricula.

The Research Edition of the OOI also presents item differences for male and female respondents. The value of sex differentiation by item responses does not have any direct value; obviously there are more effective, direct ways of determining males and females. The potential value of the sex difference in occupational orientation should be evaluated by getting samples of females in masculine-type occupations and samples of males in occupations that are predominantly held by women. The construct validity claimed for age and sex differences has no direct relevance for vocational counseling. The author recognizes that further research is necessary to determine the validity of the inventory for vocational counseling.

The Edwards Personal Preference Schedule includes 225 pairs of items designed to measure personality traits having their origin in manifest needs. There are fifteen personality need scales and one scale for response consistency. The EPPS includes the following scales: Achievement, Deference, Order, Exhibition, Autonomy, Affiliation, Intraception, Succorance, Dominance, Abasement, Nurturance, Change, Endurance, Heterosexuality, Aggression, and Consistency.

Results: The responses to the questionnaire were tabulated and the distributions of scores on the occupational attitudes and personality needs inventory were computed for each school. The school results are included in the appendix. The survey results from the three schools were then combined to obtain sufficient career choice samples to test the hypotheses under study.

Students were asked to indicate the level of education which their chosen occupations will require. Responses tabulated by ethnic groups

are presented in Table 1. The percentages in Table 1 are over 100% because some students responded to both on-the-job and educational requirements. Individual percentage figures were also rounded off to the nearest whole number.

Table 1

Proportion of Ethnic Group Respondents Indicating Levels of Education for Career Choices

Ethnic Group	Total	Proportion on-job trng.	6 mos.	1-2 yrs. vocatl.	1-2 yrs. coll.	4 yrs. coll.	1 yr. grad	2 yr. grad	3 yr. grad	No Resp.
Part Hawaiian	455	.08	.07	.23	.15	.31	.02	.10	.05	.03
Caucasian	322	.08	.14	.16	.14	.32	.01	.08	.07	.05
Part Filipino	65	.03	.16	.35	.10	.25	.03	.00	.06	.03
Cosmopolitan	51	.14	.10	.38	.16	.18	.00	.02	.00	.04
Japanese	51	.00	.10	.22	.06	.27	.02	.12	.20	.04

The Cosmopolitan group composed the greatest percentage of students who responded that their future jobs would require on-the-job-training to two years of vocational training. This can be explained by the fact that many Cosmopolitan students chose to go into service careers such as cosmetology, the military services, modeling or stewardessing. Proportionately fewer Cosmopolitan respondents planned to go to college. Other ethnic groups stated their plans for college graduation, and up to two years of graduate school, in fairly equal percentages. In the Japanese group there was an unnusually large number of students indicating three years of graduate school. Twenty percent of the Japanese plan three years of graduate school as opposed to none of the Cosmopolitan and approximately five percent of the other ethnic groups.

Responses indicating levels of educational aspiration for boys and girls are presented in Table 2.

Table 2

Proportions of Male and Female Indicating Levels of Education

Group	Total	Proportion on-job trng.	6 mos.	1-2 yrs. vocatl.	1-2 yrs. coll.	4 yrs. coll.	1 yr. grad	2 yr. grad	3 yr. grad	No Resp.
Males	483	.08	.07	.20	.12	.35	.02	.08	.09	.07
Females	522	.06	.14	.25	.15	.26	.02	.09	.04	.03

A greater percentage of females, ten percent more, responded that their future jobs would require on-the-job-training, to two years of vocational training. This is explained by the fact that a larger number of girls plan to go into fields such as airlines, clerical, or beautician work Thirteen percent more of the males than the females plan up to three years of graduate school. Responses about career choice and required levels of education indicate a definite stereotyping of jobs by sex.

Personal influences on career choices were examined in various ethnic groups. Results presented in Table 3 show that vocational choice is not greatly influenced by any one person, and that students in every ethnic group are influenced in approximately the same degree by the same persons.

Table 3

Personal Influences on Career Choices in Various Ethnic Groups

Ethnic Group	Total	Response Proportions									
		Father	Mother	Brother	Sister	Other Relative	Teacher	Counselor	Friends	Myself	Other
Part Hawaiian	455	.27	.34	.11	.07	.14	.18	.06	.20	.43	.05
Caucasian	322	.35	.23	.01	.04	.06	.10	.04	.13	.48	.10
Part Filipino, Filipino	65	.42	.31	.09	.06	.18	.23	.12	.25	.42	.15
Cosmopolitan	51	.24	.33	.08	.14	.12	.08	.08	.22	.45	.08
Japanese	51	.20	.18	.08	.07	.18	.12	.04	.12	.43	.07
Oriental-Cauc.	28	.39	.39	.07	.00	.07	.10	.10	.22	.32	.00

Students generally replied that, they themselves determine their future occupations. It is noteworthy that only a small percentage of respondents feel that teachers and school counselors help them with career choices in any significant way.

Although there were variations in the degree of parental influence on vocational preference, these were not in anticipated directions. For example, it could be hypothesized that because of family relationships and educational aspirations Japanese parents would hold a stronger influence on the career choices of their children. Contradictory to this, fewer of the students of Japanese descent acknowledged parental influence. The degree of parental influence in the Filipino and Oriental-Caucasian groups is relatively higher than for other groups. Obviously the extent of parental influence on career choice and the manner which it is perceived are complex phenomena. The response data pertaining to self-determination of choices and influence of friends is fairly consistent; but the vocational counselor should be cautious in assumption about family influences.

Experiential influences on career choices were examined in various ethnic groups. Results presented in Table 4 show that no one kind of experience can be singled out as the most important influence on vocational choice.

Table 4

Experiental Influences on Career Choices in Various Ethnic Groups

Ethnic Group	Total	Response Proportions					
		Experiences, Previous Work	School Courses	Reading	Hobby	Advertisements	Other
Part-Hawaiian	455	.23	.45	.33	.12	.09	.14
Caucasian	322	.29	.23	.32	.12	.08	.19
Part Filipino, Filipino	65	.22	.35	.48	.20	.15	.06
Cosmoplitan	51	.12	.37	.29	.07	.14	.12
Japanese	51	.18	.27	.41	.31	.00	.16
Oriental-Cauc.	28	.32	.25	.35	.14	.25	.18

Students in the different ethnic groups seem to be influenced in approximately the same degree by the same kinds of career-oriented experiences. Generally speaking, school courses and reading seem to be most influential as students make decisions about future jobs. This finding re-emphasizes the importance of career information and vocational guidance in high schools. It also points out the value of suggested reading lists with readable and interesting information about careers.

CAREER CHOICES OF ETHNIC GROUPS

There are fewer differences among ethnic groups in occupational choices than are generally presumed. Occupational choices of students in five ethnic groups show many similarities. The five groups whose occupational choices were examined are listed in order of size: Hawaiian or Part-Hawaiian, 388 respondents; Caucasian, 296 respondents; Filipino, 60 respondents; Japanese, 45 respondents; Cosmopolitan, 43 respondents. The numbers in other racial ethnic groups were not sufficient for tabulation. There was no effort to obtain samples in proportion to the adult population of Hawaii. The high schools selected provided contrasting student population rather than representative ethnic groups.

The most frequently chosen occupations for each ethnic group are shown in Table 5.

Table 5

Occupations Most Frequently Chosen by Various Ethnic Groups

Occupation	No. of Respondents	Percentage
Part-Hawaiian		
Teacher	51	.13
Engineer	46	.12
Secretary, office work	37	.10
Social Sciences	35	.09
Business Executive	24	.06
Physical Sciences	20	.05
Mechanic	16	.04
Military	16	.04
Caucasian		
Engineer	39	.13
Stewardess	34	.11
Teacher	26	.09
Military	25	.08
Physical Sciences	25	.08
Secretary, office work	25	.08
Nurse	10	.03
Beautician	9	.03
Filipino		
Engineer	11	.18
Beautician	6	.10
Mechanic	5	.08
Secretary, office work	5	.08
Teacher	5	.08
Military	4	.07
Japanese		
Engineer	9	.20
Secretary	5	.11
Social Sciences	5	.11
Artist	4	.09
Physical Sciences	3	.07
Teacher	3	.07
Cosmopolitan		
Secretary	10	.23
Stewardess	6	.14
Beautician	3	.07
Military	3	.07
Model	2	.05
Teacher	2	.05

The range of occupations selected by every ethnic group is fairly broad. Even the smallest ethnic group represented in these tabulations, the Cosmopolitan group with 43 respondents, selected nearly 25 different occupations.

The occupations consistently named by almost all ethnic groups are engineer, teacher, and physical science and social science careers. Many male respondents recognized military obligations and apparently planned to go into the service immediately after high school graduation. A number of female respondents indicated secretary, nurse, stewardess, and beautician as their first occupational choice.

No one ethnic group appeared to be more oriented toward a particular strata or type of occupation than other ethnic groups. The variations of career choices within an ethnic group were much greater than the differences between the groups. There was no indication of career-ethnic stereotyping by these 11th grade student respondents. The professional, the blue-collar, and the service occupations are equally represented in the choices of all ethnic groups.

The hypothesis that certain ethnic groups would choose specific careers evolved from a theory of family influences on career choices. It was postulated that the male students from the Japanese ethnic group would tend to choose engineering, and the females would tend to choose teaching because of parental values and orientation toward these careers. It was also postulated that Filipino girls would tend to show a greater preference for nursing careers than other ethnic groups; and that part Hawaiian students would tend to show a greater preference for civil service and entertainment careers than other ethnic groups. These are historic and cultural bases for such hypotheses, however, the career choices occurring in the various ethnic groups indicate diffusion rather than cultural-ethnic stereotyping.

CAREER CHOICES OF HIGH, MIDDLE, AND LOW ABILITY GROUPS

Of the 434 high-ability students queried about occupational choice, 399 responded with specific career preferences. Only 34 were undecided about their career aspirations. Sixty-eight, or 17%, of the high ability group indicated a primary interest in teaching. Fifty-seven, or 14%, of the group expressed interest in the engineering field. The next most frequently named occupations were in the social sciences: 34, or 8%, of the group selected various careers in the social sciences. Twenty-eight, or 7% of the students selected stewardess work. Twenty-seven or again 7% of the group chose careers in the physical sciences.

Of the 409 students in the average ability group, 376 responded with specific careers; only 33 were uncertain about their career preferences. Sixty-three or 17% of the middle ability group stated interest in clerical occupations. Thirty-three, or 9%, of the group chose stewardess work. Thirty-two of the group indicated interest in engineering. Twenty-four students, 6% of the respondents, chose beautician work. Twenty-two students indicated that they planned to go into the military after high school graduation.

Of the 162 students identified as the low ability group, 153 responded with specific future careers. 9 were undecided about their vocational plans. Twenty-four, or 15% of the low ability group chose various specializations in engineering. The next most frequently named career was stewardess, with fourteen, or 9% of the responses. Thirteen students, or 8% of the low ability group, indicated interest in the social sciences. Eleven, or 7% of the group, selected work in the clerical field. Eight students each, or 5% of the group chose the military, nursing, or teaching.

While there are similarities in career choices among the three ability groups, there are also some interesting differences. One similarity is that for all three engineering and stewardess were popular career choices. Another similarity was that the proportions of the three ability groups indicating military service were approximately equal: 5% each for the high and low groups, and 6% for the middle group.

A difference especially noted between the high and the middle ability groups lies in the types of future careers chosen. With the exception of stewardess, the careers which interested the high ability group most were professional: teaching, engineering, and the social and physical sciences. On the other hand, with the exception of engineering, the careers which interested the middle ability group most were in the service occupations: clerical work, stewardessing, cosmetology, and the military. The low ability group expressed interest in clerical work, stewardessing, and also the military services. The choices of low group also reflected a high interest in two professional fields: engineering and the social sciences. Engineering seems to hold universal appeal to boys of the three ability levels and to students from the various ethnic backgrounds. It is interesting to note that most of the

low ability group who indicated interest in the social sciences elected social work as their specific future career. If it is assumed that low ability students often come from lower social strata, in which there is greater acquaintance with social workers, then that occupational choice may be associated with that acquaintance.

The levels of academic ability of the three groups may explain the degree of their interest in teaching as a career. Sixty-eight, or 17% of the high ability group, selected teaching as their future career whereas only 5% of the middle and the low groups chose teaching.

Table 6

Career Choices of High, Average and Low Ability Groups

Choice	High Ability	Average Ability	Low Ability
Art (Commercial and Painter)	8	14	2
Beautician	2	24	7
Business Executive	16	17	3
Clerk (Civil service-general office combined)	4	14	4
Engineer			
Electrical	20	11	11
Mechanical	36	21	13
Mechanic			
Airplane	2	0	1
Auto	0	14	4
Machinist	3	4	3
Military	19	22	8
Nurse	14	11	8
Physical sciences	28	17	3
Secretary	13	49	7
Social sciences	34	12	13
Stewardess	29	33	14
Teacher			
College	1	0	0
Grammar	14	7	2
High	53	10	6
GROUP TOTALS	296	280	108

OCCUPATIONAL ORIENTATIONS OF CAREER INTEREST GROUPS

The OOI scores for career choice groups are shown in table 7. It is apparent that the level of the OOI scale scores favors the girls' career-choice groups. The scale differences among the groups are therefore not solely due to the career choices. The sex difference on the OOI scales may obscure or reverse the influence of the career choice.

Table 7

OCCUPATIONAL ORIENTATION INVENTORY SCORES BY CAREER CHOICE GROUPS

OOI Variable	Engineer		Teacher		Physical Sciences		Social Sciences		Clerical		Stewardess		Beautician		Nurse	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1. Creative-Independent	36.0	12.4	31.7	8.4	31.7	7.7	37.0	8.2	34.5	7.7	40.6	6.5	45.3	5.2	45.7	9.2
2. Risk-High	39.7	9.0	44.0	10.6	44.0	9.9	38.6	10.3	39.5	11.8	37.0	9.1	37.6	9.6	41.1	8.6
3. Information-Understanding	43.3	16.5	39.2	12.4	37.1	10.0	44.3	12.7	42.5	11.9	51.0	8.2	55.3	8.1	59.5	8.4
4. Belongingness & Love	66.9	17.4	58.4	14.5	60.4	12.0	67.7	15.5	65.7	12.9	70.5	13.7	77.9	10.8	83.5	10.9
5. Safety	61.7	22.4	50.7	19.7	50.5	17.8	63.0	17.8	59.1	22.0	69.3	18.2	78.8	13.3	79.0	8.7
6. Aspiration	61.5	13.2	60.0	10.8	52.2	9.1	62.0	8.6	60.7	9.4	64.5	10.0	70.9	11.9	70.0	12.5
7. Esteem	35.8	11.2	31.0	9.0	30.6	8.5	36.9	9.3	36.0	9.6	39.5	9.1	44.0	6.7	45.0	6.4
8. Self-Actualization	35.9	15.6	29.9	12.3	28.5	13.3	37.3	15.1	35.4	14.1	44.6	13.4	49.6	6.4	51.2	6.3
9. Satisfaction	36.2	15.0	30.8	12.6	31.3	11.5	37.3	14.1	36.7	12.8	43.4	13.1	50.3	6.7	52.5	6.9
10. Data	41.4	14.5	39.9	11.9	38.2	9.1	41.7	13.3	42.3	9.8	48.0	10.1	53.0	8.1	59.8	8.9
11. Routine-Independent	30.2	5.9	28.2	5.2	30.5	6.7	29.6	6.5	29.8	5.1	28.8	6.3	31.6	44.6	35.8	6.3
12. Thing	30.7	8.4	29.6	7.3	29.6	5.6	30.0	8.9	29.6	4.3	32.6	9.0	34.3	7.9	32.2	8.4
13. People	87.6	14.4	79.0	16.5	76.2	14.8	86.7	17.1	83.0	14.7	89.5	13.4	99.6	16.1	102.7	12.0
14. Place	23.6	8.4	25.4	10.9	23.7	8.8	24.0	11.4	22.9	7.1	24.0	10.6	33.6	11.9	34.2	13.2
15. Aptitude	23.0	9.8	23.5	8.8	21.6	9.4	21.7	9.1	21.0	7.2	20.8	9.4	28.3	6.7	30.7	9.0
16. Monetary	24.0	7.6	23.1	8.3	24.2	14.5	21.2	6.8	23.1	7.1	21.4	8.0	28.6	6.7	29.0	9.7
17. Physical Ability	12.8	6.4	14.2	5.8	12.2	5.7	13.3	6.3	12.4	4.5	14.1	5.6	17.4	4.7	18.5	6.7
18. Circum	27.3	9.5	29.5	10.2	27.6	10.2	28.2	10.7	28.8	6.9	29.3	10.8	35.7	10.8	40.8	13.1
19. Co-Workers	13.1	11.8	14.1	7.0	10.1	4.9	14.4	6.5	11.1	4.5	13.5	8.4	19.2	7.2	20.0	9.3
20. Qualification	28.2	10.4	28.7	9.8	28.6	10.0	27.7	8.9	26.9	7.2	25.5	9.7	35.5	10.5	36.4	14.3
21. Time	13.5	6.5	13.8	6.4	11.3	3.3	11.9	4.7	12.2	3.8	13.4	4.5	15.5	5.1	16.0	5.7
22. Extremism	27.7	8.1	25.7	7.2	26.6	7.9	29.0	6.8	26.3	6.3	28.4	7.4	35.3	7.0	34.6	8.9
23. Defensiveness	8.9	3.1	8.8	3.8	8.2	3.0	10.3	3.4	10.5	3.0	10.5	4.5	8.6	3.8	11.0	4.2

Creative-Independent: Students who indicate future career interest in nursing scored highest on the Creative-Independent scale. They are followed very closely by those who chose cosmetology for their future work. Those interested in teaching and in the physical sciences scored lowest on this scale. Since high scorers on the scale express a desire for work that has great variety, that is basically abstract and is performed in an atmosphere free of close supervision, it is unexpected that prospective nurses should score as high as they did. Perhaps this may have been due to the fact that students glamorized the nursing field and were not adequately informed of the duties and actual work environment.

Risk-High: High scorers on this scale express desire for work that is exciting and often dangerous. Inexplicably, students who chose teaching and physical science careers received the highest scores on this scale, while future stewardesses received the lowest scores.

Information-Understanding: High scoring students on this scale express desire for work that provides continuous learning opportunities. Future nurses, beauticians, stewardesses, in that order received high scorers on this scale. While it seems reasonable that future nurses and possibly beauticians might find continuous learning opportunities in their careers, it does not seem logical that stewardesses would obtain such a high mean score. Students who chose teaching and physical science careers might be expected to score high on this scale; however their scores indicated less orientation for information. These findings may place doubt on the validity of this scale.

Belongingness and Love: High scorers on this scale express desire for approval from others and have a tendency to cultivate close relationships with friends and co-workers. Future nurses and beauticians obtained the highest scores on this scale. These two occupations are similar in that they involve close employee-client relationships. Logically, students who chose work in the physical sciences may be expected to receive low scores on this scale because careers in their field generally do not tend to revolve around other persons.

Safety: High scorers on this scale express a desire for stability and security in their jobs; they tend to reject work environment injurious to physical or emotional health. Again, students who chose to be nurses and beauticians obtained the highest scores on this scale, while those in the physical sciences obtained the lowest scores.

Aspiration: High scorers on this scale express a desire for responsibility, promotion, and try to advance in their work. Surprisingly, students who chose beautician work obtained the highest scores on this scale. This fact is not as easy to explain as the fact that prospective nurses also obtained high scores in this category. Nursing traditionally involves responsibility for other people and implies a dedication to do the work well. The lowest scores were received by those interested in

the physical sciences. This may be explained by the fact that, aside for research, physical scientists are primarily concerned with the study of physical phenomena, and may be less concerned with personal advancement.

Esteem: High scorers on this scale are concerned with gaining prestige and public recognition through work. Since Aspiration and Esteem are closely related, it is consistent that future nurses and beauticians obtained high scores on this scale, while those interested in the physical sciences received low scores.

Self-Actualization: High scorers on this scale want variety, obvious advancement opportunities, and freedom to do the job their own way. This scale is very similar to the Creative-Independent OOI scale. Similarly, students interested in nursing and cosmetology were high scorers, while future physical scientist were low scorers. The Creative-Independent and Self-Actualization scales appeared to serve as a consistency check for the other scale.

Satisfaction: High scorers on this scale express desire for intrinsic, non-material rewards of work. Future nurses obtained high scores on this scale, while future teachers scored low.

Data: High scorers on this scale wish to work with computational, mathematical and other information of a precision nature. Inexplicably, students interested in engineering and in science did not score as high as those interested in nursing. While nursing functions do not require the analysis of data, the actual on-the-job duties would seem to eventually become more person-oriented than would engineering or the sciences. Those interested in the physical sciences, interestingly enough, obtained the lowest scores on this scale.

Routine-Independent: High scorers on this scale want work of a short-cycle nature which is concrete, routine, and organized. It would seem logical that those interested in the clerical fields would be high scorers on this scale. Although the mean score of students choosing clerical work was fairly high, it was not as high as the mean score of future nurses. Future teachers obtained low score on this scale.

Thing: High scorers on this scale express a desire to work with objects rather than with people or with data. Future beauticians obtained the highest scores on the scale. Those interested in teaching, the physical sciences, and clerical work showed less desire to work with objects.

People: High scorers on this scale express a desire to work directly with people. Students interested in nursing, cosmetology, and stewardessing obtained the highest scores on this scale. Surprisingly future teachers were low scorers on this scale. Students who preferred physical science careers logically, were the lowest scorers.

Place: High scorers on this scale indicate intense concern about the location, atmosphere and physical environment of their job. Stu-

dents interested in nursing showed most concern in this area, while those interested in clerical work showed least concern.

Aptitude: High scorers on this scale show intense concern about aptitudes relevant to many occupations (i.e., verbal, numerical, spatial, aptitudes). Future nurses and beauticians were high scorers on this scale. This student group may possibly be more aware of specific career aptitudes. Stewardesses, whose careers seem to require general rather than specific aptitudes, obtained lowest scores.

Monetary: High scorers on this scale show concern about salary, company insurance, bonus, and other aspects of monetary rewards. Students interested in nursing showed highest concern, while those interested in the social sciences showed least concern.

Physical Ability: High scorers on this scale indicate concern about the physical capacities required for their chosen careers. This scale is somewhat related to the Aptitude scale on which a high score shows concern about aptitudes required for careers. Again, nurses and beauticians obtained the highest scores. Those students interested in the physical sciences showed least concern about physical ability requirements in their chosen careers.

Circum: High scorers on this scale indicate concern about the total work environment ranging from co-workers, company rules, to physical safety. This scale is related somewhat to Place,/ and People scales. Similarly, students interested in nursing and beautician work are high scorers on the Circum scale. Future engineers obtained the lowest mean score on this scale.

Co-Workers: High scorers on this scale suggest intense concern about the age, sex, education, economic status, and other factors related to co-workers. Again, this scale is somewhat related to the Circum scale. As anticipated,nurses and cosmetologists obtained relatively high scores. Those interested in clerical work obtained the lowest scores on this scale.

Qualification: High scorers on this scale indicate concern about work experience, educational level, recommendations, and other factors of this type. Students who chose nursing and cosmetology indicated highest concern about Qualifications. Stewardesses, perhaps because of the general rather than specific requirements of their job qualifications, showed least concern.

Time: High scorers on this scale show concern about the work units (hours, days, months, years) of an occupation. Students who chose nursing and beautician careers showed highest concern, while those choosing physical science careers showed least concern.

Extremism: Because some individuals approach a testing situation with a tendency to mark mostly "extreme" or "moderate" responses, this scale was incorporated into the test to help identify such individuals.

A high score on the Extremism scale shows tendency to give extreme responses. A low score on this scale shows consistently average scores, indicating that while individual students may have exhibited tendency toward "extreme" or "moderate" answers, the student careers groups as a whole did not show such tendencies.

Defensiveness: Many of the statements on this test have obvious social implications. The individual's responses to these items could be altered by an effort to present himself in a favorable or unfavorable light. To help identify such response sets, this scale was incorporated into the OOI. High scores on this scale suggest "faking", careless marking, failure to understand directions, or other reasons that should lower the confidence that can be given to a subject's responses. Again, the responses of students' in the various occupational groups resulted in moderately low scores. There was no group tendency toward "faking"and misunderstanding.

It was hypothesized that students who choose engineering and physical science careers have different vocational orientations on the OOI from those who chose social science or teaching careers. The profile difference was tested in a discriminant analysis. There were 96 students in the combined engineering and physical science group and 95 in the social sciences and teaching group. The mean scale scores, scale differences and discriminant function coefficients are shown in table 8.

Table 8

COI Scale Score Means, Mean Differences and Discriminant Coefficients for two Career Fields

Scale	Engineering and Physical Sciences	Teachers and Social Sciences	Mean Difference	Discriminant Function
Creative Independent	39.92	37.49	2.43	-.019
Risk High	35.61	37.91	-2.30	.041
Info-Understanding	49.18	45.54	3.64	-.022
Belongingness and Love	69.95	66.51	3.44	-.016
Safety	70.08	63.33	6.74	.032
Aspiration	64.68	62.66	2.02	-.028
Esteem	40.78	37.20	3.58	.009
Self Actualization	44.17	39.82	4.35	.036
Satisfaction	44.46	39.50	4.96	.023
Data	46.27	43.54	2.72	.001
Routine-Independent	26.51	26.79	- .28	.033
Thing	31.04	29.08	1.95	.045
People	86.56	86.35	.20	-.016
Place	21.13	23.06	-1.92	.002
Aptitude	19.16	22.02	-2.85	.007
Monetary	21.80	21.00	.80	.041
Physical Ability	10.09	12.91	-2.82	-.045
Circum	24.51	28.20	-3.68	-.059
Coworkers	10.91	13.30	-2.38	-.022
Qualification	24.72	27.04	-2.31	.034
Time	11.46	12.04	- .57	.032
Extremism	26.89	26.18	.70	.008
Defensiveness	10.60	10.25	.35	.001

* Discriminant coefficients x^{-2}

The distance function obtained in this analysis was $D^2 = 1.11$. The F statistic for 23 and 167 degrees of freedom is 2.033, significant at the .01 level. It is concluded that classification of the students into the two career-choice fields on the basis of COI profiles was successful. The mean discriminant score for the engineer group was .033 and for the social science group was.027. In applying the discriminant equation to the groups there were 72 percent in each group correctly classified.

PERSONAL NEEDS PROFILES OF CAREER CHOICE GROUPS

The EPPS scores for the various career choice groups are shown in table 9.

PERSONALITY NEEDS SCORES BY CAREER CHOICE GROUPS

EPPS Variable	Engineer		Teacher		Physical Sciences		Social Sciences		Clerical		Stewardess		Beautican		Nurse	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Achievement	15.2	4.3	13.3	4.2	12.5	4.3	12.0	3.2	12.5	3.5	10.2	3.0	10.9	1.9	11.3	3.2
Deference	12.4	3.3	12.3	3.8	12.4	4,2	12.0	3.0	12.6	3.3	11.8	2.8	12.5	2.6	14.0	2.2
Order	12.8	4.4	12.5	3.8	11.5	3.5	11.6	3.9	13.6	4.7	12.3	3.4	14.9	3.5	12.6	3.7
Exhibition	14.2	3.3	14.4	3.4	14.2	3.2	13.1	3.4	13.8	3.6	14.2	3.2	12.8	2.8	13.0	3.2
Autonomy	14.9	5.5	13.4	3.5	14.6	4.5	14.7	4.7	11.6	4.6	13.5	3.2	12.1	2.5	13.0	3.5
Affiliation	12.2	4.2	14.9	4.2	14.2	6.0	14.6	3.3	15.4	4.8	15.3	4.5	15.1	3.0	14.0	3.4
Intraception	15.0	4.2	16.6	4.2	16.3	6.1	19.9	3.5	16.0	4.7	18.2	2.8	15.9	3.4	17.5	4.3
Succorance	10.3	3.8	11.8	4.3	11.0	4.6	9.5	3.8	12.1	3.9	10.3	4.0	10.6	2.0	9.5	3.1
Dominance	13.0	5.3	13.5	5.0	14.2	4.8	12.5	4.2	12.1	5.1	11.8	4.0	11.4	3.1	12.1	3.3
Abasement	14.9	5.0	16.4	4.6	16.4	3.7	16.7	3.4	18.5	4.6	16.1	3.7	18.9	3.0	17.7	3.5
Nurturance	13.5	3.7	14.3	4.7	14.5	5.5	15.8	4.2	15.8	5.2	16.1	3.3	16.1	3.1	15.4	3.8
Change	17.5	4.1	18.4	4.8	17.6	4.8	18.3	3.6	17.9	3.9	21.3	3.8	16.5	3.2	15.6	2.8
Endurance	14.7	4.9	13.6	5.3	13.5	5.4	13.8	5.4	14.1	4.7	13.3	4.8	15.1	4.1	15.0	3.7
Heterosexuality	15.1	6.2	11.3	4.9	11.7	9.3	10.5	5.6	9.5	6.4	11.6	5.1	10.9	4.7	13.0	6.8
Agression	13.0	4.4	11.8	4.5	12.3	5.5	13.7	4.0	12.8	4.6	13.0	3.6	14.8	4.7	15.2	4.4
Consistency	15.1	2.9	16.1	2.9	15.3	2.0	16.5	2.8	16.4	2.2	16.7	2.7	16.3	2.7	15.9	2.7

Achievement: Students who chose to go into the engineering fields showed the highest need-for-achievement. This is an expected result, for of the eight career choice groups selected for this discussion, the engineering group would require most years of higher education; furthermore, those who select engineering are usually aware of the requirement of extended professional education. Future teachers showed the next highest need-for-achievement; again, their career education responses indicated that they were generally aware of the college education requirement. Another logical result is that those who selected stewardess and beautician work showed the lowest need-for-achievement.

Deference: Future nurses showed most willingness to show deference to the demands of other people and of the work situation. Students who chose secretarial and beautician work, respectively, show next highest need to incorporate deference into their chosen job situations: in both fields the employee is directly responsible to the demands of employer and client. Students inclined toward stewardessing show least concern for deference.

Order: Students who chose beautician careers showed highest need-for-order in job duties, procedures, and environment. Students who choose clerical work for their future occupations show next highest need for order. Those students who selected future careers in the physical sciences (i.e., mathematics, biology, physics) show least concern for order.

Exhibition: The future teachers showed highest need-for-exhibition. This seems reasonable since of the eight career groups, teachers are in closest and most sustained contact with people. Future stewardesses follow teachers closely in need-for-exhibition, along with those who plan to go into engineering and the physical sciences. Those who plan a service career in cosmetology show least need-for-exhibition.

Autonomy: Students who chose engineering seemed most concerned with the autonomy they will have in their future work. Engineers exercise a fair amount of autonomy in career situations because their work is not essentially people-oriented and there is less interpersonal dependency than in many other occupations. On the other hand, those interested in routine clerical functions showed least concern with the autonomy they will have in their work life.

Affiliation: Prospective clerical workers, stewardesses, and beauticians, in that order, indicated greatest need to identify themselves with the people with whom and for whom they work. Again, since engineers are apparently less involved with people and most concerned with things, the students who aspired to engineering show less need-for-affiliation.

Intraception: Those who chose to go into the social sciences showed the greatest need to put themselves into another's situation and to understand by identification with that person. It is interesting that future stewardesses, rather than nurses or teachers, showed the next highest need-for-intraception. Those interested in engineering showed lowest need in this category.

Succourance: Students who choose clerical work for their future occupations indicate highest need to give aid and assistance. Again, since engineering is not people-oriented, those interested in the field show lowest need to give succourance. Future engineers unexpectedly are tied in their low mean score by stewardesses, whose job duties include helping other people.

Dominance: Students who choose to go into the physical sciences showed greated need to dominate in a job situation. They are followed by future teachers and by future engineers. Future beauticians showed lowest need-to-dominate.

Abasement: Students who want to become beauticians show greatest need and willingness to abase self-interest for the interest of others. This is an understandable result since cosmetology is a service occupation. Prospective office workers and nurses follow the beautician group in this category. Students interested in engineering show least need-for-abasement.

Nurturance: Future beauticians and stewardesses were generally comparable in their need to give nurturance to others. Those interested in teaching showed surprisingly low need-to-foster or to sustain others, while engineers show least concern in this category.

Change: Future stewardesses showed most need for change in their work, while those interested in nursing, and cosmetology indicate least need for change.

Endurance: Those students who choose beautician work and nursing showed greatest willingness for a work situation which requires endurance. Future stewardesses and teachers showed little tolerance for endurance situations.

Heterosexuality: Students who chose engineering and nursing careers showed relatively higher needs for heterosexual experience than students with other career choices. Among the career groups, those who chose clerical occupations were relatively lower in heterosexual interest.

It was hypothesized that students choose careers which they conceptualize as satisfying their personal needs. In order to test this hypothesis discriminant analysis of the EPPS profiles were carried out to determine to what extent the students would be classifiable into career fields on the basis of their Needs scores.

The students who chose engineering and physical science careers were combined into one group, and the students who chose social science and teaching careers were combined for a second group. There were 45 and 66 students respectively, in the combined groups. The means, mean differences of the EPPS profiles and discriminant function coefficients for the two groups are shown in table 10.

Table 10

EPPS Profiles and Discriminant Coefficients for Two Career Fields

Scale	Engineering and Physical Science	Social Science and Teachers	Difference	Discriminant Coefficient*
Achievement	14.40	12.83	1.56	.062
Deference	12.42	12.53	- .10	.001
Order	12.44	12.22	.21	.012
Exhibition	14.26	14.00	.26	.103
Autonomy	14.86	13.87	.98	.056
Affiliation	12.86	14.83	-1.96	.116
Intraception	15.42	17.84	-2.42	.102
Succorance	10.55	10.98	- .42	.006
Dominance	13.40	13.15	.24	.046
Abasement	15.37	16.57	-1.19	.040
Nurturance	13.84	14.86	-1.01	.027
Change	17.59	18.42	- .82	.051
Endurance	14.40	13.75	.64	.002
Heterosexuality	14.06	11.03	3.03	.053
Agression	12.86	12.51	.35	.040
Consistency	15.24	16.27	-1.02	.099

* Coefficient X^{-2}

The greatest mean differences in the profiles appeared on the Heterosexuality, Intraception, Affiliation, and Achievement Scales. The Intraception and Affiliative scale differences contributed more to the profile differentiation than the Heterosexuality and Achievement Need scales. The distance function (Mahalanobis, 1936), D^2 was 1.41. With 16 and 44 degrees on freedom the F value for the discrimination is non significant. The probability is greater than .15 that such profile variation could arise by chance.(.20> p> .15). In testing the effectiveness of the classification the discriminant equation correctly classified 29 of the 45 in the engineering and physical science groups, and 50 of the 66 in the Social Science group. In computing the discriminant score for individuals in the two groups it appeared that the profile characteristics of the social science group were more variable than the physical science group. The mean discriminant score for the physical science group was -.056 and for the social science group was -.065. Although the group differentiation was not significant there was an indication that personal needs are more inclined to influence the vocational choices of students selecting engineering and physical science careers. The personal needs of students selecting social science careers are of lesser influence in their career choice.

Summary

The results verify some of the hypotheses of this study and failed to support others. They also suggest steps which might be taken to improve the vocational counseling program in high schools.

The survey indicated that girls still tend to choose those careers traditionally reserved for them. Teaching, nursing, clerical work, the beautician and stewardess fields were popularly selected by the 11th grade girls Only a few girls chose careers such as lawyer, scientist or mathematician, crossing into the male occupational province. High School girls also planned on fewer years of training and/or education than did the boys.

This study also verifies that high school juniors generally lack knowledge about occupations. While they have some realistic information, particularly about the amount of training necessary for specific careers, they have little factual knowledge about the content of vocational curricula and about job duties and work conditions. It seems that students have a fairly accurate estimate of their academic abilities, and generally choose occupations commensurate with these abilities. Item responses on the OOI indicated that some students glamorize their chosen careers, e.g. students who chose to be stewardesses are more aware of the travel and public contact aspects of the job and less aware of the waitress service and clerical aspects. Students who select medicine are apt to think of the income and prestige connected with the profession and are generally unaware of the time and personal-service demands in these careers.

The hypothesis that high school students tend to choose future careers which are consonant with their personality needs was confirmed. For a specific example, students with greatest need for exhibition selected stewardess work, with its high index of public exposure. Students with a high need to give succourance to others chose to become nurses. Those motivated by need for achievement selected professions which require years of education, and which lead to the possibility of achievement recognition. This study failed to support the hypothesis that racial background would result in stereotyped career choices. To the contrary, results showed that students chose a range of professional, semi-professional, blue collar, and service occupations in similar proportions, no matter what their ethnic background. It was interesting to note, however, that an unusual number of Japanese students planned three years of graduate school, not because their future careers would require it, but apparently because they seemed to value advanced graduate study.

It was also hypothesized that personal and experiential influences on career choices would be associated with ethnic background. For example, it was postulated that students from Oriental families, with their tradition of parental control and family-centered life, would experience more family influence on their career choices. This is apparently no longer the case. High school students today, no matter what their ethnic or cultural background tend to make their own occupational choices. Family influences were acknowledged by a minor percentage of students.

The results of this study suggest a number of actions which might contribute to more effective vocational counseling at the high school level.

1. Because a large number of students responded that school courses influence their career choices, a study should be made of the vocational education content of general courses and determine whether the career implications of general courses is made explicit or recognized by teachers and students.

2. Since students responded that reading career information is a valuable influence in vocatinnal choice schools should have books, phamphlets and other career literature effectively disseminated to students.

3. In addition to a program of vocational resource speakers who visit the school, students might plan more field trips to work sites to obtain more accurate information about work settings and conditions.

There are several implications of the relationship between personal need and career choices for vocational guidance. If the personal needs are stable and mature then the choice of a career to fulfill them is obviously appropriate. In contrast to this if exaggerated and immature personal needs lead a student to an unrealistic vocational choice then obviously the personal needs will not be satisfied and the individual may show instability in vocational training and in subsequent placement. In such cases perhaps a delay of career choice and of training would be indicated until a higher level of personal maturity is attained. One example of such a relationship might exist for an adolescent who shows a high need for autonomy as part of an adolescent adjustment pattern. This need may subside or be reduced in early adulthood. The degree of personal needs influence on vocational choice may vary, and the types of career preferences also change.

Because of the complexity of relationships between career choices, personal needs and the attitudinal orientation of individuals toward work conditions the need for longitudinal study of vocational development is recognized. Career information, education and guidance influences on the vocational development of students will need to be studied systematically in order to effectuate a more scientific approach to this field.

Appendix

Summary of Career Choice Questionnaires for

Radford High School
Kamehameha High School
Waianae High School

Summary Statistics for EPPS Scores of Kamehameha Students

Summary Statistics for EPPS Scores of Waianae Students

Project: Vocational Concepts
Vocational Research Coordinating Unit
D. Leton; C. Dodd; D. Kent

Summary of Career Choice Questionnaire

Radford High School

The responses to the Career Choice Questionnaire for Radford High School were tabulated and summarized. The data presented in the following tables are based on 424 completed questionnaires. Incomplete questionnaires and those with invalid response information were excluded from the tabulations. Responses for the 202 boys and 222 girls were separately tabulated for some of the items, and combined for other items in the questionnaire.

Career Choices

The complete list of primary and secondary career choices are included in the appendix. The most frequent choices made by both sexes are presented in table 1.

Table 1

Percentages of First and Second Choices for Boys and Girls

	First Choice				Second Choice		
Career	Sex	No.	%*		Sex	No.	%
Stewardess	F	47	13	Stewardess	F	26	09
Secretary	F	35	09	Military Service	M	25	09
Engineering	M	34	09	Physical Scientist	M	18	07
Military Service	M	30	08	Social Scientist	M & F	17	06
Physical Scientist	M	28	08	Secretary	F	16	06
Teacher	F	26	07	Teacher	F	15	05
Nurse	F	13	04	Engineering	M	12	04
Beautician	F	13	04	Nurse	F	10	04
(no choice)		53	13	(no choice)		148	35

*Percent of responses based on 371 and 276 designated first and second career choices; percent of no choice based on 424 total respondents.

As observed in previous studies high school girls tend to choose a limited number of specific careers. Five career choices, i.e., stewardess,

secretary, teacher, nurse, and beautician, accounted for two-thirds of the girls' choices. In contrast to this the boys' choices ranged over a wider variety of careers in various fields. Their choices were classified into engineering, military service, and physical science fields. These three career fields included about 11 specific careers, and they only accounted for 92, or about fifty percent of the boys' career choices. The remaining fifty percent were distributed among 40 other careers.

It appears that this sample of high school girls tended to choose careers which are typically filled by their sex. These choices reflect their own stereotyped view of female-role careers. This view also seems to involve some unrealistic concepts about vocational opportunities. Over one-third of the girls aspired to become stewardesses. These choices are generally made without factual information on the opportunities for employment, and without a realistic awareness of the types of duties and work conditions which prevail in this occupation.

The range of careers considered by the total class is fairly broad. The grouping of several scientific and professional fields was appropriate for the tabulation of responses.

Job Features

Twenty-three possible job features were presented in the next question. The students were requested to select the five job features which they would seek in their career and to rank these five in the order of their importance. All of the job features were included in the selections, with the most desirable job feature receiving 221 and the least desirable job feature receiving only 6 of the 2057 nominations. The students selections

were weighted from 5 to 1 for their order of importance. The weighted rankings of the job features are presented in table 2.

Table 2

Selections of Desirable Job Features

Features	Ranking 1st	2nd	3rd	4th	5th	Total	Total Weighted Score
Satisfaction in what you make or do	101	42	34	17	27	221	836
Security, job is stable	88	42	25	18	24	197	743
Potential income, high pay	51	41	42	28	33	195	634
Opportunity to travel	27	43	28	45	59	202	540
Opportunities to meet people	29	39	36	43	31	178	526
Opportunity for advancement	12	30	37	32	20	131	375
Excitement, changes	18	15	26	24	39	92	315
Good working hours	8	23	30	28	30	91	308
Opportunity to serve others	13	15	23	32	23	106	281
Independence, freedom	0	20	26	21	10	77	210
Opportunity for self improvement	5	17	14	22	16	74	205
A "thinking" job	6	18	17	12	10	63	187
Physical work, opportunity to work with hands	9	17	10	10	9	55	172
Working with children	12	14	9	11	3	49	168
Fringe benefits, insurance, vacations	6	8	13	15	13	55	144
Outdoor work	9	6	9	16	14	54	142
Specialization, expert, few qualify	8	7	12	13	8	48	138
Prestige, authority on the job	2	9	10	14	21	56	125
Opportunities to be alone	12	5	5	7	2	31	111
Opportunities to meet opposite sex	4	4	11	11	12	42	103
Easy job, easy to learn	3	6	6	1	8	24	67
Dressing up	0	1	0	2	7	10	15
Little responsibility, just follow orders	0	1	0	1	4	6	10

Career-Education

The assumption that post high school education or on-the-job training is required for all careers was implicit in the next question. The distribution of estimates on the level of education required for the career choices is shown in figure 1.

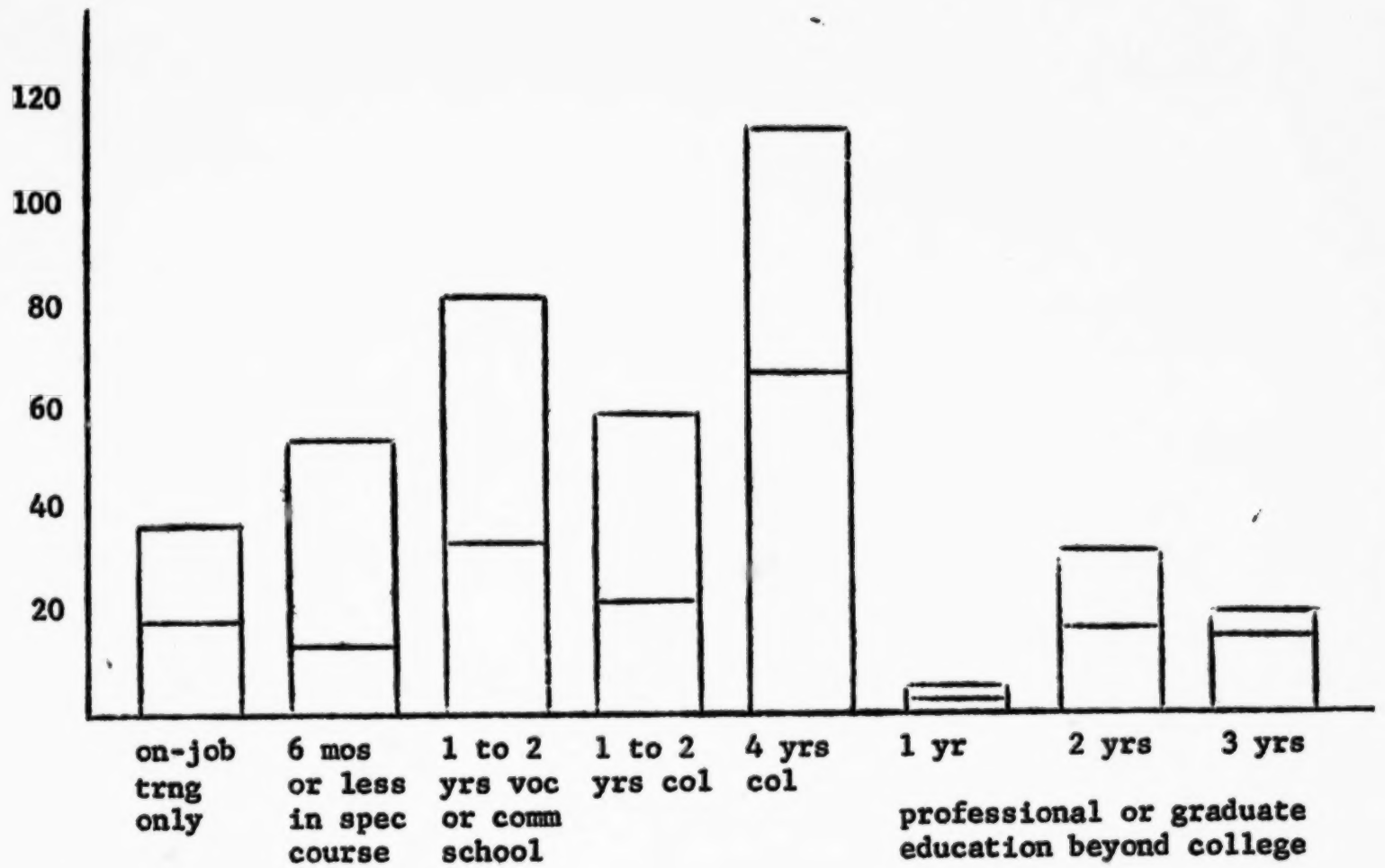

Figure 1. Estimates of levels of education required for chosen careers

Twenty percent of the students indicated that their careers would require 1 to 2 years in a vocational school or commercial school. These estimates were generally consistent with their career choices. The level of education presumed for the majority of careers was 4 years of college. There may be a cultural expectancy that 4 years of college is related to most professions. Less than 15% of the students aspired to graduate education or professional training beyond 4 years of college; however, approximately 20% chose careers which ordinarily involve graduate studies.

The majority of students are confident of their abilities to complete the education or training required for their careers. Eighty five percent

of the students ranged from average to very confident of their abilities. The distribution of responses to this item are summarized as follows: unsure about abilities 10%, below-average confidence 5%, average confidence 46%, above-average 26%, very confident of abilities 14%. The fact that ten percent of the students were unsure of their abilities and five percent were below average in their confidence represents a possible problem for educational and vocational guidance. The question to be considered is whether their career aspirations are beyond the students' levels of academic aptitude or whether this represents a personal insecurity independent of the students' aptitudes.

Influences on Preferences

Parents' influences on career choices was acknowledged by a large proportion of the students. One third of the students responded that their father had influenced their choice and one-fourth of the students indicated that their mother had influenced their choice. The most popular response for this item was that the student had chosen the career by himself, without the influence of others. Nine percent of the respondents indicated that a teacher had been influential in their career preferences, and only 3 percent indicated that a counselor had influenced their careers. These data clearly indicate that personal consultation, advice or assistance in considering career objectives is not typically centered in one person. Parents, friends, and teachers represent personal resources. The counselor's role to assist in career planning is either not recognized or not effective. The tabulations of these personal influences on careers are shown in table 3.

Table 3

Personal Influences on Career Preference

Person	n Respondents	Proportion
Father	140	.33
Mother	102	.24
Brother	12	.03
Sister	21	.05
Other relative	25	.06
A teacher	42	.09
A counselor	13	.03
Friends	57	.13
Myself	176	.42
Other persons	34	.08

Almost one-fourth of the students responded that school courses had influenced their career preferences. Although the common practice is to postpone vocational coursework to post high school years it appears that some of the general high school courses have career implications for a certain proportion of the students. Reading about career fields also represents an important prevocational influence which should perhaps be studied in greater detail. Whether students are guided in their reading about careers, or whether they seek such material in their own vocational explorations, may be important information for guidance specialists. The responses to the item on experience bases of career preferences are presented in table 4.

Table 4

Experiential Bases of Career Preferences

Item	n	Proportion of respondents
Previous work experiences	106	.25
School courses	102	.24
Reading about career	129	.30
Hobby, leisure activities	55	.13
Advertisements	37	.09
Other experiences	74	.17

It is hypothesized that the family ethnic background is an important factor in students' career choices. About three-fourths of the 11th grade respondents for Radford were of Caucasian descent. The racial ethnic ancestry is indicated in table 5. Further study of the types of careers chosen by various ethnic groups, and of the influence of parents from various ethnic backgrounds will be studied in the combined data for the three participating schools.

Table 5

Racial-Ethnic Ancestry of Student Respondents

Group	Father		Mother	
	n	%	n	%
Japanese	23	.054	33	.078
Caucasian	327	.771	303	.715
Chinese	21	.050	26	.061
Korean	0	.000	2	.005
Filipino	22	.052	22	.052
Portuguese	10	.023	17	.040
Negro	8	.019	8	.019
Samoan	3	.007	6	.014
Hawaiian	18	.042	35	.084
Other	39	.092	34	.080

Knowledge about Careers

One of the reasons that students may be undecided or unrealistic in their career choices is that they lack sufficient information about careers. Information on the amount of education or training required for various careers may be relatively easy to obtain, however, knowledge of the work conditions which prevail for specific careers is not as easily available. Perhaps a career aspirant should have an integrated concept of both the training prerequisites and the environmental demands.

The students' responses to this item were distributed as follows: 10% replied "I know very little about requirements and conditions, 39%

replied "I have some knowledge, but need a lot more," 17% reported average knowledge, 26% judged that they had fairly accurate knowledge and 8% felt that they had a thorough knowledge about their chosen career. The need for more information was generally acknowledged; almost half of the respondents checked the two lowest categories.

The students ranked eight procedures for their potential value for obtaining information. These rankings were weighted from 8 to 11 to obtain a mean rank for each procedure. The procedures are presented in the order of their ranking in table 6. The distributions of responses from which the mean ranks were obtained is included in the appendix.

Table 6

Ranking of Procedures for Obtaining Career Information

Procedure	Mean of Ranks
Interview someone from this field	5.94
Visit the business, industry or office	5.14
Representative come to school	5.09
Observe someone carrying out duties	4.62
Read a pamphlet or book about career	4.47
Ask employment counselor about career	4.25
Ask a school counselor about career	3.50
Talk to other students	2.51

The procedures which involve a direct experience with someone in the field were favored over discussions with counselors or with peers. If career guidance were to include interviews with representatives from various fields, field trips to business, industry and offices, and opportunities to observe workers in their duties, systematic planning and flexible programming in related courses would be necessary. While this may be viewed as undesirable from the standpoint of continuity in other courses it could

actually improve the academic motivations of students by relating their curricula to career motivations. Motivation for careers could bring meaning to coursework which is now commonly seen by students as unrelated to any of their long-term objectives.

Project: Vocational Concepts
Vocational Research Coordinating Unit
D. Leton; C. Dodd

Summary of Career Choice Questionnaire

Kamehameha High School

Responses to the Career Choice Questionaaire for Kamehameha High School were tabulated and summarized. Data presented in the following tables are based on 332 completed questionnaires. Incomplete questionnaires and those with invalid response information were excluded from the tabulations. Responses for the 156 boys and 176 girls were separately tabulated for some of the items, and combined for other items of the questionnaire.

Career Choices

The complete list of primary and secondary career choices are included in the appendix. The most frequent choices made by both sexes are presented in table 1.

Table 1

Percentages of First and Second Choices for Boys and Girls

	First Choice				Second Choice		
Career	Sex	No.	%*	Career	Sex	No.	%
Teacher	F	51	.15	Teacher	F	34	.15
Engineer	M	40	.12	Stewardess	F	21	.09
Social Scientist	M & F	25	.08	Social Scientist	M & F	19	.08
Secretary	F	23	.08	Secretary	F	15	.07
Business Executive	M	22	.07	Engineer	M	14	.06
Physical Scientist	M	18	.06	Military	M	12	.05
Stewardess	F	13	.04	Musician	M & F	10	.04
(no choice)		27	.08	(no choice)		107	.32

*Percent of responses based on 305 and 225 designated first and second career choices; percent of no choice based on 332 total respondents.

As observed in previous studies high school girls tend to choose a limited number of specific careers. Four choices, i.e., teacher, secretary, stewardess,

and clerical jobs such as accountant and office clerk, accounted for nearly three-fifths of the girls' choices. It appears that this sample of high school girls tended to choose careers which are typically filled by their sex. These choices reflect stereotyped views of female-role careers.

In contrast to limited female choices, the boys' choices ranged over a wider variety of careers in various fields. Most frequently mentioned choices were classified into engineering, business, and physical science fields. These three career fields include several specific careers, and they only accounted for 80, or above fifty per cent of the boys' choices. The remaining fifty percent were distributed among 35 other careers.

Job Features

Students then indicated which five of twenty-three job features they would seek in their career. They ranked these features in order of importance. Twenty-two of the features were included in the selections: No one said he would want little responsibility in his career. The most desirable feature received 194 nominations, while the second least desirable feature received only 6 of the 1647 nominations. The students' selections were weighted from 5 to 1 in order of importance. Weighted rankings are presented in table 2.

Table 2

Selections of Desirable Job Features

Features	Ranking 1st	2nd	3rd	4th	5th	Total	Total Weighted Score
Security, job is stable	97	44	21	16	16	194	772
Potential income, high pay	44	52	32	38	25	191	625
Satisfaction in what you make or do	63	40	21	15	14	153	572
Opportunity for advancement	13	23	31	35	24	126	344
Opportunities to meet people	16	20	37	21	21	115	334
Opportunity to travel	9	18	27	30	46	130	304
Good working hours	3	24	26	35	28	116	287
Opportunity for self-improvement on-the-job training	10	15	15	18	22	80	213
Fringe benefits, insurance, vacations	4	8	24	26	29	91	205
Opportunity to serve others	11	14	13	11	16	65	188
Prestige, authority in job	8	14	12	7	14	55	160
A "thinking" job	10	14	7	9	7	47	152
Excitement changes	6	7	14	17	17	61	151
Independence, freedom	5	7	15	8	18	53	132
Specialization, expert, few qualify	9	8	8	11	6	42	129
Working with children	9	5	13	5	5	37	119
Physical work, opportunity to work with hands	3	10	7	13	6	39	108
Outdoor work	9	6	5	4	2	26	94
Opportunities to be alone	0	1	1	3	3	8	16
Opportunities to meet opposite sex	0	0	1	4	3	8	14
Easy job, easy to learn	1	0	0	2	1	4	10
Dressing up	0	0	0	1	5	6	7
Little responsibility, just follow orders	0	0	0	0	0	0	0

Career-Education

The assumption that post high school education or on-the-job training is required for all careers was implicit in the next question. The distribution of estimates on the level of education required for career choices is shown in figure 1.

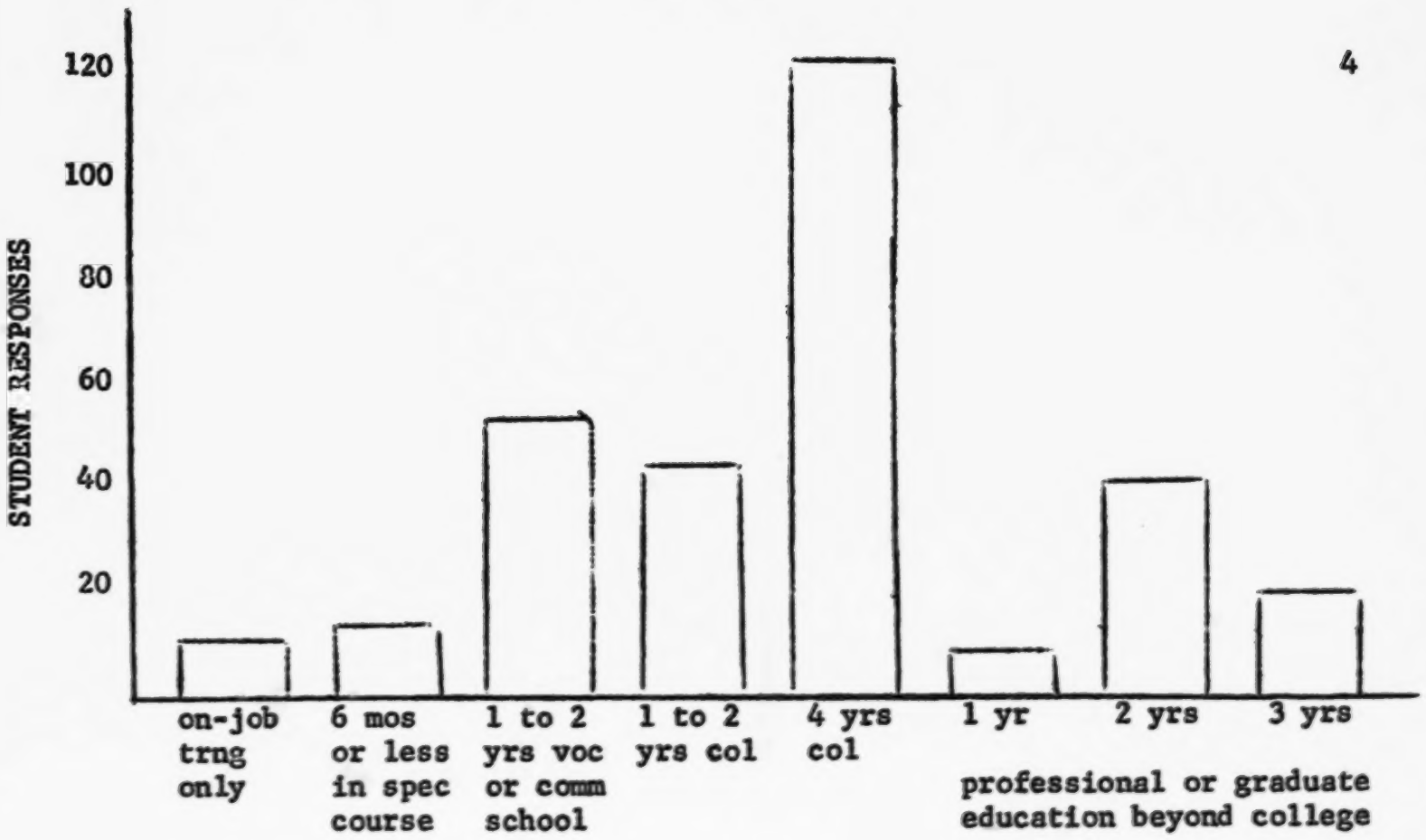

Figure 1. Estimates of levels of education required for chosen careers

Seventeen percent of the students stated that their careers would require 1 to 2 years in a vocational or commercial school. These estimates were consistent with their career choices. The level of education presumed for the majority of careers was 4 years of college. Twenty-two percent of the students aspired to professional training or graduate education beyond 4 years of college. Again these estimates were consistent with their career choices.

The majority of students are confident of their abilities to complete the training or education necessary for their careers. Ninety percent of the students stated that they had average to high confidence in their abilities. Distribution of responses to this item are summarized as follows: unsure about abilities, 6%; below-average confidence, 4%; average confidence, 38%; above-average confidence, 41%; very confident of abilities, 12%. The ten percent of students who were unsure of their abilities or had below-average confidence represent a possible problem for educational and vocational guidance.

Influences on Preferences

Forty-six percent of the students stated that they had chosen their careers by themselves, without the influence of others. A large proportion of the students indicated that their parents influenced their career preferences. Twenty percent of the students indicated that a teacher had been influential in their career choices; five percent stated that a counselor had influenced their choices. These data clearly indicate that personal consultation, advice or assistance in career objectives is not typically centered in one person. Parents, teachers, and friends represent resources. Tabulations of personal influences on career choices are shown in table 3.

Table 3

Personal Influences on Career Preferences

Person	n Respondents	Proportion
Father	78	.24
Mother	94	.28
Brother	27	.08
Sister	20	.06
Other Relative	38	.12
A Teacher	65	.20
A Counselor	16	.05
Friends	58	.18
Myself	153	.46
Other persons	20	.06

A large number of students, forty-five percent, said that school courses had influenced their career choices. Although vocational course work is usually postponed to post high school years, it seems that some of the general high school courses have career implications for a high proportion of the students. Reading about career fields also represents an important career influence which should perhaps be studied in greater detail. Responses to the item on experience bases of career preferences are presented in table 4.

Table 4

Experiential Bases of Career Preferences

Item	n Respondents	Proportion
Previous work experience	63	.19
School courses	148	.45
Reading about career	99	.30
Hobby, leisure activities	39	.12
Advertisements	36	.11
Other experiences	54	.16

It is hypothesized that family ethnic background is one important factor in students' career choices. Racial-ethnic ancestry is indicated in table 5. Further study of the types of careers chosen by various ethnic groups, and of the influence of parents from various ethnic backgrounds will be studied in the combined data for the three participating schools.

Table 5

Racial-Ethnic Ancestry of Student Respondents

Group	Father		Mother	
	n	%	n	%
Japanese	32	.10	53	.16
Caucasian	149	.45	156	.47
Chinese	120	.36	141	.43
Korean	4	.01	10	.03
Filipino	15	.05	11	.03
Portuguese	33	.10	40	.12
Negro	0	.00	0	.00
Samoan	2	.01	2	.01
Hawaiian	214	.65	234	.71
Other	38	.11	41	.12

Knowledge About Careers

Almost one-half of the students acknowledged need for more information about their career choices. Responses to this item were distributed as follows: 10% stated, "I know very little about requirements and conditions"; 39% stated, "I have some knowledge, but need a lot more"; 17% reported average knowledge;

27% reported fairly accurate knowledge; 9% reported very thorough knowledge about their career choice.

Students ranked eight procedures for potential value for obtaining information about careers. These rankings were weighted from 8 to 1 to obtain a mean rank for each procedure. The procedures are presented in order of their ranking in table 6. Distributions of responses from which the mean ranks were obtained is included in the appendix.

Table 6

Ranking of Procedures for Obtaining Career Information

Procedure	Mean of Ranks
Interview someone from this field	5.86
Representative come to school	5.63
Visit to business, industry or office	5.10
Observation of someone carrying out duties	4.82
Ask employment counselor about career	4.28
Ask a school counselor about career	4.02
Read a pamphlet or book about career	3.79
Talk to other students	2.54

Procedures which involve a direct experience with someone in the field were favored over discussions with counselors or with peers. If career guidance were to include interviews with representatives from various fields, field trips to business, industry and offices, and opportunities to observe workers in their duties, systematic planning and flexible programming in related courses would be necessary. While this may be viewed as undesirable from the standpoint of continuity in other courses it could actually improve the academic motivations of students by relating their curricula to career motivations. Motivation for careers could bring meaning to course work which is often seen by students as unrelated to many of their long-term objectives.

Project: Vocational Concepts
Vocational Research Coordinating Unit
D. Leton; C. Dodd

Summary of Career Choice Questionnaire

Waianae High School

Responses to the Career Choice Questionnaire for Waianae High School were tabulated and summarized. Data presented in this report were based on 249 completed questionnaires. Incomplete questionnaires or those with invalid response information were excluded from the tabulations. Responses for the 125 boys and 124 girls were separately tabulated for some of the items, and combined for other items in the questionnaire.

Career Choices

The complete list of primary and secondary career choices are included in the appendix. The most frequently chosen careers by both sexes are listed in Table 1.

Table 1.

Table 1

Percentages of First and Second Choices for Boys and Girls

First Choice				Second Choice			
Career	Sex	No.	%*	Career	Sex	No.	%
Engineer	M	25	.21	Military Service	M	21	.25
Mechanic	M	22	.19	Mechanic	M	16	.19
Military Service	M	16	.13	Social Sciences	M & F	16	.16
Beautician	F	16	.13	Stewardess	F	13	.12
Nurse	F	15	.12	Engineer	M	9	.11
Stewardess	F	14	.12	Secretary	F	11	.10
(no choice)		8	.03	(no choice)		56	.22

*Percent of responses based on 119 males and 122 females for first choice, 83 males and 110 females for second choice; percent of no responses based on 249 total respondents.

The range of careers selected by the total class is fairly broad. However, one half of the boys chose engineering, mechanics, or military service for their future careers; over one-third of the girls chose beautician, nurse, or stewardess work.

Past studies show that girls usually channel their career choices into a limited number of specific careers; by contrast, boys' choices usually range over a wider variety of careers in many fields. The range of career choices for this sample of female respondents were somewhat wider than usual. More types of occupations were listed than are ordinarily mentioned by girls. It is interesting to note that an unusual number of girls chose the social sciences, with a majority stating interest in social work.

Job Features

Twenty-three possible job features were presented in the next question. Students were asked to select the five job features which they would seek in their career and to rank these five in order of their importance. All of the job features were included in the selections, with the most desirable job feature receiving 113 and the least desirable receiving only 6 of the 1225 nominations. Students' selections were weighted from 5 to 1 for their order of importance. The weighted rankings of the job features are presented in Table 2.

Table 2

Selections of Desirable Job Features

Features	Ranking 1st	2nd	3rd	4th	5th	Total	Total Weighted Score
Security, job is stable	70	17	6	9	11	113	465
Potential income, high pay	29	33	23	11	7	103	375
Good working hours	15	24	32	31	17	119	346
Opportunities to meet people	16	24	32	22	18	112	334
Opportunity to travel	14	16	17	37	30	114	279
Satisfaction in what you make or do	17	19	19	10	12	77	250
Opportunity for advancement	9	13	17	21	10	70	200
Opportunity to serve others	7	16	15	12	14	64	182
Working with children	11	16	6	10	4	47	161
Physical work, opportunity to work with hands	8	11	12	6	5	42	137
Opportunity for self improvement, on-the-job training, education	8	0	9	17	17	51	118
Excitement, changes	4	9	10	8	22	53	116
Fringe benefits, insurance, vacations	2	3	15	9	19	51	101
A "thinking" job	7	6	4	7	3	27	88
Easy job, easy to learn	10	4	2	5	0	21	82
Specialization, expert, few qualify	6	6	5	2	8	27	81
Outdoor work	2	5	3	9	12	31	69
Independence, freedom	2	5	5	5	6	23	61
Prestige, authority in job	3	1	2	3	5	19	61
Opportunities to meet opposite sex	1	2	5	11	9	28	59
Dressing up	2	3	5	1	6	17	45
Opportunities to be alone	1	2	3	1	3	10	27
Little responsibility, just follow orders	0	2	0	1	3	6	13

Career-Education

The assumption that post high school education or on-the-job training is required for all careers was implicit in the next question. The distribution of estimates on the level of education required for the career choices is shown in Figure 1.

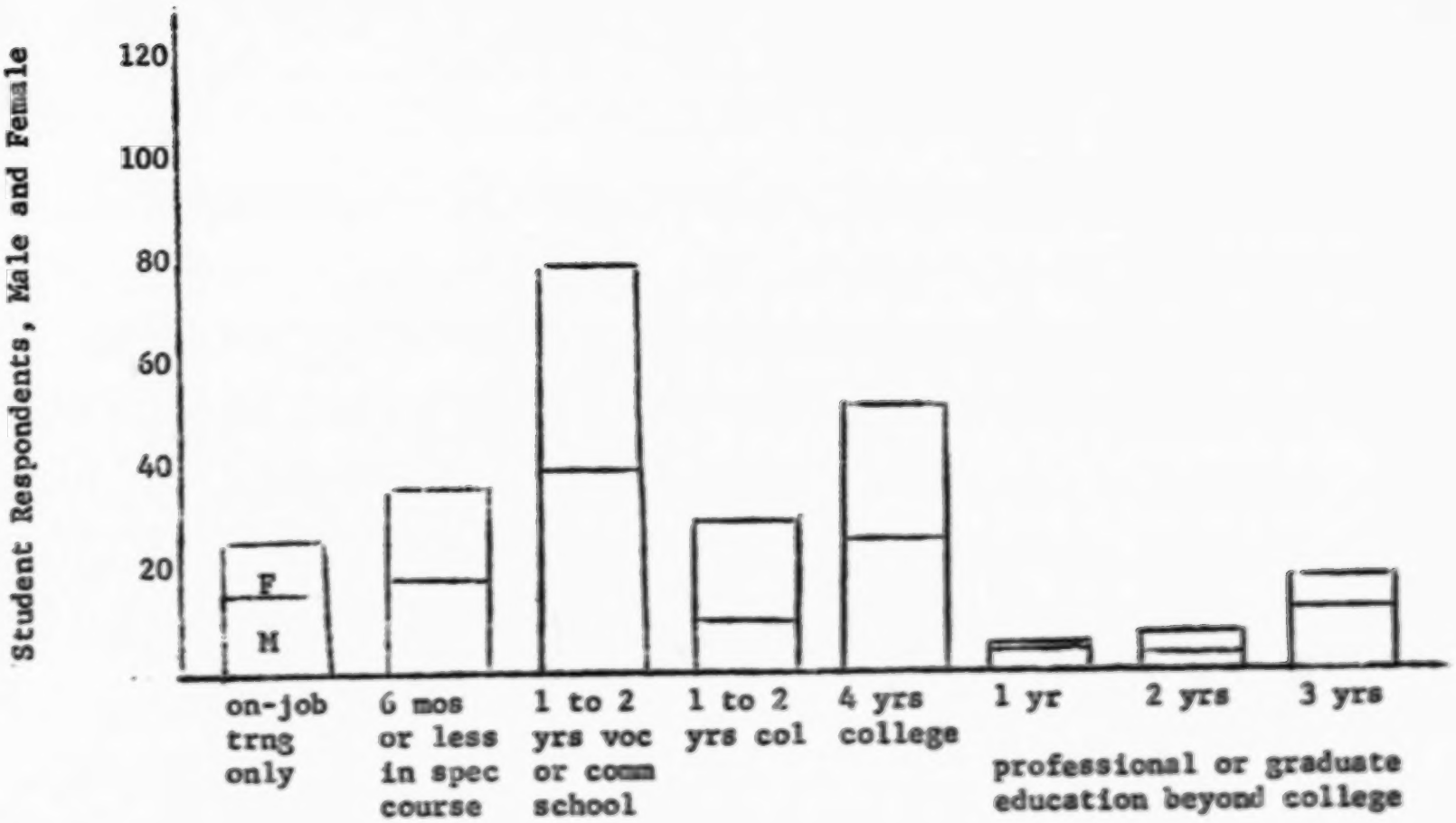

Figure 1. Estimates of levels of education required for chosen careers

Most of the respondents, thirty-three percent of the boys and thirty-four percent of the girls, stated that their chosen careers would require one to two years of vocational or community school training. These estimates were generally consistent with their career choices. Approximately twenty-three percent of the respondents aspired to professional training or graduate education beyond four years of college. These estimates again were consistent with career choices.

The majority of students are confident of their abilities to complete the training or education required for their careers. Eighty-three percent of the students stated they had average to high confidence in their abilities. Distribution of responses to this item are summarized as follows: unsure about abilities, 13%; below-average confidence, 6%; average confidence 45%; above-average confidence, 27%; very confident of abilities, 11%. The fact that thirteen percent of the students were unsure of their abilities and six percent were below average in their confidence represents a possible problem for educational and vocational guidance.

Influences on Preferences

A large group of respondents indicated that parents and family had influenced career choice. Thirty-five percent of the students stated their father had influenced their choice; forty-one percent said their mother had influenced their choice; forty-two percent acknowledged influence of siblings or other relatives. Forty-three percent of the students said that they had chosen the career by themselves, without the influence of others. Fifteen percent stated that their choice had been influenced by a teacher, while twelve percent were influenced by a counsellor. These data clearly show that personal consultation, advise or assistance in considering career objectives is not typically centered in one person. Tabulations of these personal influences on careers are shown in Table 3.

Table 3

Personal Influences on Career Preferences

Person	n Respondents	Proportion
Father	88	.35
Mother	102	.41
Brother	31	.13
Sister	20	.08
Other relative	53	.21
A teacher	38	.15
A counsellor	29	.12
Friends	57	.23
Myself	106	.43
Other persons	20	.08

Almost one-half of the students said that reading had influenced their career choice. One-third stated that school courses had influenced them, a sizeable number, one-third of the students, stated that previous work experience had influenced them. Responses to the item on experience bases of career preferences are presented in Table 4.

Table 4

Experiential Bases on Career Preferences

Item	n	Proportion
Previous work experiences	77	.31
School courses	85	.34
Reading about career	118	.47
Hobby, leisure activities	42	.17
Advertisements	32	.13
Other experiences	23	.09

It is hypothesized that family ethnic background is an important factor in students' career choices. Many of the respondents, close to forty percent, are of Hawaiian descent. Racial-ethnic ancestry is indicated in Table 5. Further study of the types of careers chosen by various ethnic groups, and of the influence of parents from various ethnic background will be studied in the combined data for the three participating schools.

Table 5

Racial-Ethnic Ancestry of Student Responses

Group	Father		Mother	
	n	%	n	%
Japanese	42	.17	52	.21
Caucasian	49	.20	50	.20
Chinese	39	.16	58	.23
Korean	7	.03	6	.02
Filipino	68	.27	55	.22
Portuguese	37	.15	24	.10
Negro	3	.01	0	.00
Samoan	4	.02	1	.004
Hawaiian	72	.29	98	.39
Other	51	.21	47	.19

Knowledge About Careers

One reason that students may be undecided or unrealistic in career choices is that they lack sufficient information about careers. Factual information, such as training or education required for various careers, is easily obtained. However, other kinds of information, such as knowledge of prevailing work conditions for specific careers, is not as easily available. A career aspirant should have an integrated concept of both types of information.

Students' responses to this item were distributed as follows: 10% reported they knew very little about requirements and conditions; 51% reported that they had some knowledge but needed a lot more; 21% reported average knowledge; 14% reported fairly accurate knowledge; and 4% reported thorough knowledge. More than half of the respondents acknowledged need for more information.

Students then ranked eight potential value in obtaining career information. These rankings were weighted from 8 to 1 to obtain a mean rank for each procedure. The procedures are printed in the order of their ranking in Table 6. Distribution of responses from which mean ranks were obtained is included in the appendix.

Table 6

Ranking of Procedures for Obtaining Career Information

Procedure	Mean of Ranks
Interview someone from this field	5.73
Visit the business, industry or office	5.59
Representative come to school	5.58
Observe someone carrying out duties	4.48
Ask employment counsellor about career	4.41
Ask school counsellor about career	4.10
Read pamphlet or book about career	3.64
Talk to other students	2.53

Procedures which involve direct contact with someone already in the field were favored over discussions with counsellors or peers. If career guidance were to include interviews with representatives from various fields, field trips to business, industry and offices, and opportunities to observe workers in their duties, systematic planning and flexible programming in related courses would be necessary. While this maybe viewed as undesirable from the standpoint of continuity in other courses it could actually improve the academic motivations of students by relating their curricula to career motivations.

Table A

Summary Statistics for the EPPS Score Distributions at Kamehameha High School

Scales	Males (139)		Females (174)		Total (313)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Achievement	13.8	3.94	12.6	3.98	13.1	4.01
Deference	11.8	3.37	12.0	3.88	11.9	3.65
Order	11.8	4.03	11.4	4.07	11.6	4.05
Exhibition	14.4	3.32	14.5	3.20	14.5	3.25
Autonomy	14.7	4.34	13.3	4.60	13.9	4.53
Affiliation	13.5	4.17	15.4	4.93	14.6	4.70
Intraception	15.0	4.41	18.1	4.34	16.7	4.63
Succorance	10.5	3.99	11.6	4.78	11.1	4.47
Dominance	14.8	4.97	12.3	4.65	13.4	4.95
Abasement	15.2	4.36	16.8	4.94	16.1	4.76
Nurturance	13.3	4.19	15.5	4.59	14.5	4.54
Change	16.0	4.10	19.1	4.48	17.7	4.58
Endurance	12.9	4.93	12.5	4.99	12.6	4.96
Heterosexuality	15.2	6.81	10.8	6.59	12.7	7.04
Agression	14.4	4.66	12.1	4.53	13.2	4.72
Consistency	15.3	2.94	16.0	2.76	15.7	2.86

Table B

Summary Statistics for the EPPS Score Distributions at Waianae High School

Scales	Males (119)		Females (117)		Total (236)	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
Achievement	12.8	3.21	11.6	3.60	12.2	3.46
Deference	12.7	2.96	12.8	2.93	12.7	2.94
Order	14.4	3.32	13.9	4.15	14.1	3.75
Exhibition	13.6	2.81	12.6	3.06	13.1	2.98
Autonomy	13.6	3.91	12.6	3.65	13.1	3.81
Affiliation	13.5	3.54	14.9	3.84	14.2	3.75
Intraception	13.7	3.96	16.6	4.04	15.1	4.26
Succorance	11.8	3.53	10.9	3.64	11.4	3.61
Dominance	13.3	3.34	12.1	4.13	12.7	3.79
Abasement	14.5	3.83	17.2	3.85	15.9	4.07
Nurturance	13.2	4.10	15.9	4.22	14.5	4.37
Change	16.3	3.98	18.6	4.11	17.5	4.20
Endurance	14.9	3.73	14.6	4.99	14.7	4.39
Heterosexuality	15.2	5.50	10.8	5.54	13.0	5.93
Agression	14.3	4.03	13.4	4.26	13.9	4.16
Consistency	15.8	2.60	15.8	2.84	15.8	2.71

Tabulations of Questionnaire-Responses

By School Samples

CONCEPTS OF CAREER FIELDS

HELD BY

ELEVENTH GRADE STUDENTS

Primary Occupational Choices of 305* Kamehameha Juniors

No. 1-3

Occupation	Number	Percent
Accountant	5	.016
Actor	2	.007
Architect	4	.013
Artist		
Commercial	3	.010
Painter	3	.010
Bank Teller	2	.007
Business Executive	22	.072
Chef	1	.003
Chemist	2	.007
Clerk		
Civil Service	3	.010
General Office	3	.010
Court Reporter	1	.003
Dentist	1	.003
Diplomat (Foreign Service)	1	.003
Draftsman	2	.007
Electrician	1	.003
Engineer		
Electrical-Electronics	15	.049
Mechanical	25	.082
Fireman	1	.003
Home Economist	2	.007
IBM Tabulating Machine Operator	4	.013
Interior Decorator	4	.013
Lawyer	5	.016
Librarian	1	.003
Mechanic		
Auto	1	.003
Machinist	2	.007
Military Service	3	.010
Model	1	.003
Music, Instrumentalist, Singer, Teacher	3	.010
Nurse	5	.016
Physical Sciences, i.e., Geophysicist, Mathematician, Physicist, Zoologist, etc.	18	.059
Photographer	1	.003
Physician	4	.013
Pilot	6	.020
Policeman	9	.030
Programmer	3	.010
Radio Announcer	9	.030

* 27 juniors expressed no primary choice

No. 1-3 cont'd

Occupation	Number	Percent
Real Estate Agent	1	.003
Secretary	23	.075
Social Sciences, i.e., Anthropologist, Criminologist, Historian, Sociologist, etc.	25	.082
Sports, Professional	6	.020
Stewardess	13	.043
Stock Broker	1	.003
Teacher		
College	1	.003
Grammar	4	.013
High	46	.151
Translator	1	.003
Veterinarian	1	.003
VISTA Peace Corps	1	.003
Writer, Public Relations	2	.007

Second Occupational Choices of 225* Kamehameha Juniors

No. 4-6

Occupation	Number	Percent
Accountant	2	.009
Actor	2	.009
Architect	3	.013
Artist		
Commercial	4	.018
Painter	3	.013
Beautician	1	.004
Business Executive	9	.040
Chemist	2	.009
Clerk		
Civil Service	2	.009
General Office	2	.009
Clergyman	1	.004
Dentist	1	.004
Electrician	1	.004
Engineer		
Chemical	1	.004
Mechanical	13	.058
Fireman	1	.004
Home Economist	4	.018
IBM Tabulating Machine Operator	2	.009
Interior Decorator	1	.004
Lawyer	1	.004
Military Service	12	.053
Model	3	.013
Music, Instrumentalist, Singer, Teacher	10	.044
Nurse	4	.018
Physical Sciences, i.e., Geophysicist, Mathematician, Physician, Zoologist, etc.	9	.040
Physical Therapist	1	.004
Physician	2	.009
Pilot	2	.009
Plumber	1	.004
Policeman	4	.018
Programmer	4	.018
Radio Announcer	11	.049
Real Estate Agent	2	.009
Secretary	15	.067
Social Sciences, i.e., Anthropologist, Criminologist, Historian, Sociologist, etc.	19	.084

* 107 juniors had no second choice

No. 4-6 cont'd

Occupation	Number	Percent
Sports, Professional	4	.018
Stagehand	1	.004
Stewardess	21	.093
Teacher		
College	2	.009
Grammar	6	.027
High	26	.116
Translator	3	.013
Underwriter	1	.004
Veterinarian	2	.009
Writer, Public Relations	3	.013
X-ray Technician	1	.004

No. 11, 12

01	21	.064
02	21	.064
03	12	.036
04	0	.000
05	32	.097
06	7	.021
07	8	.024
08	24	.073
09	7	.021
10	26	.079
11	15	.045
12	1	.003
13	31	.094
14	37	.112
15	13	.039
16	1	.003
17	13	.039
18	0	.000
19	15	.045
20	5	.015
21	27	.082
22	0	.000
23	14	.042

No. 13, 14

01	16	.049
02	15	.046
03	7	.021
04	2	.006
05	38	.116
06	13	.040
07	11	.033
08	26	.079
09	9	.027
10	35	.106
11	8	.024
12	3	.009
13	35	.106
14	21	.064
15	5	.015
16	4	.012
17	11	.033
18	1	.003
19	18	.055
20	4	.012
21	30	.091
22	0	.000
23	17	.052

Note: 1 additional subject did not respond to No. 13, 14: total responses = 329

No. 15, 16

01	16	.049
02	14	.043
03	14	.043
04	1	.003
05	25	.076
06	6	.018
07	6	.018
08	29	.088
09	7	.021
10	28	.085
11	18	.055
12	3	.009
13	24	.073
14	21	.064
15	5	.015
16	3	.009
17	16	.049
18	5	.015
19	22	.067
20	2	.006
21	46	.140
22	0	.000
23	17	.052

Note: 2 additional subjects did not respond to No. 15, 16. Total responses = 328

Training Necessary*
No. 17

01	11	.034
02	13	.040
03	53	.165
04	45	.140
05	122	.379
06	9	.028
07	41	.127
08	20	.062

* 8 juniors did not respond to No. 17

Confidence
No. 18

01	18	.055
02	13	.040
03	123	.377
04	132	.405
05	40	.122

* 6 juniors did not respond to No. 18

Influences on Career Preferences

No. 19-34

19	Father	78	.235
20	Mother	94	.283
21	Brother	27	.081
22	Sister	20	.062
23	Other relative	38	.115
24	A teacher	65	.196
25	A counselor	16	.048
26	Friends	58	.175
27	Myself	153	.461
28	Other persons	20	.062
29	Experiences, previous		
30	work	63	.190
31	School courses	148	.446
32	Reading	99	.298
33	Hobby	39	.118
34	Advertisements	36	.108
	Other Experiences	54	.163

Racial Descent

No. 35-54

	Mother			Father		
Japanese	35	53	.160	45	32	.096
Caucasian	36	156	.470	46	149	.449
Chinese	37	141	.425	47	120	.361
Korean	38	10	.030	48	4	.012
Filipino	39	11	.033	49	15	.045
Portuguese	40	40	.120	50	33	.099
Negro	41	0	.000	51	0	.000
Samoan	42	2	.006	52	2	.006
Hawaiian	43	234	.705	53	214	.645
Other	44	41	.123	54	38	.114

Knowledge: Total 322

55.	None	22
	Some	132
	Average	70
	Fairly Accurate	89
	Thorough Knowledge	9

Aids to Giving Knowledge of Careers

No. 56 - 63

56. Representative: Total 319	1.	77	.241
	2.	51	.160
	3.	50	.157
	4.	60	.188
	5.	27	.085
	6.	22	.069
	7.	18	.056
Mean rank 5.63	8.	14	.044
57. Interview: Total 318	1.	70	.220
	2.	71	.223
	3.	58	.182
	4.	50	.157
	5.	29	.091
	6.	20	.063
	7.	13	.041
Mean rank 5.86	8.	7	.022
58. Pamphlet or Book: Total 318	1.	33	.104
	2.	26	.082
	3.	26	.082
	4.	27	.085
	5.	36	.113
	6.	49	.154
	7.	56	.176
Mean rank 3.79	8.	65	.204
59. Employment Counselor: Total 318	1.	9	.028
	2.	30	.094
	3.	44	.138
	4.	52	.164
	5.	77	.242
	6.	53	.167
	7.	36	.113
Mean rank 4.28	8.	17	.053
60. Visit to Business: Total 318	1.	40	.126
	2.	57	.179
	3.	60	.189
	4.	39	.123
	5.	42	.132
	6.	33	.104
	7.	34	.107
Mean rank 5.10	8.	13	.041

61. School Counselor: Total 318	1.	33	.104
	2.	29	.091
	3.	25	.079
	4.	26	.082
	5.	43	.135
	6.	65	.204
	7.	68	.214
Mean rank: 4.02	8.	29	.091
62. Observation of Someone on Job: Total 318			
	1.	46	.145
	2.	45	.142
	3.	37	.116
	4.	48	.151
	5.	41	.129
	6.	46	.145
	7.	31	.097
Mean rank: 4.82	8.	24	.075
63. Talking to Other Students: Total 316	1.	12	.038
	2.	13	.041
	3.	14	.044
	4.	16	.050
	5.	23	.073
	6.	31	.098
	7.	61	.193
Mean rank: 2.54	8.	146	.462

K-3

Primary Occupational Choices of 371* Radford Juniors

No. 1-3

Occupation	Number	Percent
Accountant	3	.008
Actor	2	.005
Architect	5	.013
Artist		
Commercial	9	.024
Painter	2	.005
Bank Teller	1	.003
Beautician	13	.035
Business Executive	3	.008
Buyer	1	.003
Carpenter	1	.003
Chemist	1	.003
Clerk		
Civil Service	6	.016
General Office	5	.013
Clergyman	1	.008
Cook, Hotel & Restaurant	1	.003
Dental Assistant	1	.003
Dentist	1	.003
Diplomat (Foreign Service)	2	.005
Draftsman	3	.008
Economist	1	.003
Engineer		
Chemical	1	.003
Electrical-Electronics	10	.027
Mechanical	23	.063
Fireman	1	.003
Guide, Travel & Tour	1	.003
Home Economist	4	.011
IBM Tabulating Machine Operator	4	.011
Interior Decorator	4	.011
Lawyer	7	.019
Lifeguard	1	.003
Mechanic		
Airplane	2	.005
Auto	2	.005
Machinist	2	.005
Military Service	30	.081
Model	6	.016
Music, Instrumentalist, Singer Teacher	8	.022
Nurse	13	.035
Pharmacist	1	.003
Physical Sciences, i.e., Geophysicist, Mathematician, Physicist, Zoologist	28	.075

*53 juniors expressed no primary choice

No. 1-3 con'd

Occupation	Number	Percent
Physical Therapist	2	.005
Physician	7	.019
Pilot	7	.019
Policeman	2	.005
Programmer	1	.003
Radio Announcer	1	.003
Salesman	1	.003
Secretary	35	.094
Social Sciences, i.e., Anthropologist, Criminologist, Historian, Sociologist	11	.030
Sports, Professional	4	.011
Stewardess	47	.126
Stock Broker	2	.005
Teacher		
Grammar	12	.032
High	14	.038
Translator	3	.008
Veterinarian	3	.008
Vista-Peace Corps	1	.003
Writer, Public Relations	7	.019
X-ray Technician	1	.003

Second Occupational Choices of 276* Radford Juniors

No. 4-6

Occupation	Number	Percent
Accountant	3	.011
Actor	3	.011
Architect	5	.018
Artist		
Commercial	9	.033
Painter	4	.014
Bank Teller	1	.004
Beautician	6	.022
Bookkeeper	1	.004
Carpenter	2	.007
Chemist	8	.029
Clerk		
Civil Service	5	.018
General Office	6	.022

* 148 juniors had no second vocational choice

No. 4-6 cont'd

Occupation	Number	Percent
Cook, Hotel & Restaurant	1	.004
Crane Operator	1	.004
Draftsman	2	.007
Engineer		
Chemical	1	.004
Electrical-Electronics	3	.011
Mechanical	8	.029
Fireman	1	.004
IBM Tabulating Machine Operator	3	.011
Interior Decorator	1	.004
Lawyer	6	.022
Librarian	1	.004
Lifeguard	1	.004
Mechanic		
Auto	2	.007
Machinist	3	.011
Military Service	25	.091
Model	8	.029
Music, Instrumentalist, Singer, Teacher	7	.025
Nurse	10	.036
Nurse's Aide, Attendant	1	.004
Pharmacist	3	.011
Physical Sciences, i.e., Geophysicist, Mathematician, Physicist, Zoologist	18	.065
Physical Therapist	1	.004
Physician	4	.014
Photographer	2	.007
Pilot	4	.014
Policeman	5	.018
Programmer	1	.004
Radio Announcer	2	.007
Salesman	3	.011
Secretary	16	.058
Social Sciences, i.e., Anthropologist, Criminologist, Historian, Sociologist	17	.062
Sports, Professional	5	.018
Stewardess	26	.094
Teacher		
Grammar	4	.014
High	9	.033
College	2	.007
Telephone Operator	1	.004
Translator	2	.007
Typist, Clerk	1	.004
Veterinarian	2	.007
VISTA, Peace Corps	2	.007
Writer, Public Relations	6	.022
X-ray Technician	2	.007

Job Qualities Listed in Order of Their Importance

No. 7,8			No. 9,10		
01	88	.208	01	42	.099
02	101	.237	02	42	.099
03	2	.005	03	9	.021
04	3	.007	04	6	.014
05	51	.121	05	41	.097
06	9	.021	06	17	.040
07	8	.020	07	7	.017
08	6	.014	08	8	.020
09	6	.014	09	18	.042
10	8	.020	10	23	.054
12	12	.028	11	20	.047
13	12	.028	12	5	.011
14	29	.069	13	30	.070
15	12	.028	14	39	.092
16	4	.009	15	14	.033
17	13	.031	16	4	.009
18	0	.000	17	15	.035
19	5	.011	18	1	.002
20	09	.021	19	17	.040
21	27	.064	20	6	.014
22	0	.000	21	43	.102
23	18	.042	22	1	.002
			23	15	.035

No. 11, 12			No. 13, 14		
01	25	.059	01	18	.042
02	34	.080	02	17	.040
03	10	.024	03	14	.033
04	6	.014	04	1	.002
05	42	.099	05	28	.066
06	10	.024	06	10	.024
07	12	.028	07	13	.031
08	13	.031	08	15	.035
09	17	.040	09	12	.028
10	30	.070	10	28	.066
11	26	.061	11	21	.050
12	5	.011	12	7	.017
13	37	.087	13	32	.076
14	36	.085	14	43	.102
15	9	.021	15	11	.026
16	11	.026	16	11	.026
17	23	.054	17	32	.076
18	0	.000	18	2	.005
19	14	.033	19	22	.052
20	09	.021	20	16	.038
21	28	.066	21	45	.106
22	0	.000	22	01	.002
23	26	.061	23	24	.05[illegible]

No. 15, 16

01	24	.057
02	27	.064
03	21	.050
04	8	.020
05	33	.078
06	9	.021
07	8	.020
08	13	.031
09	10	.024
10	30	.070
11	10	.024
12	2	.005
13	20	.047
14	31	.073
15	3	.007
16	12	.028
17	23	.054
18	7	.017
19	16	.038
20	14	.033
21	59	.139
22	4	.009
23	39	.092

Training Necessary
No. 17

01	37	.092
02	53	.132
03	82	.203
04	59	.146
05	115	.285
06	5	.012
07	32	.079
08	20	.050

Confidence

No. 18

01	40	.098
02	20	.050
03	186	.457
04	104	.256
05	57	.140

Influences on Career Preferences

No. 19 - 34

19.	Father	140	.330
20.	Mother	102	.241
21.	Brother	12	.028
22.	Sister	21	.050
23.	Other Relative	25	.059
24.	A Teacher	42	.090
25.	A Counselor	13	.031
26.	Friends	57	.134
27.	Myself	176	.415
28.	Other persons	34	.080
29.	Experiences	106	.250
30.	School Courses	102	.241
31.	Reading	129	.304
32.	Hobby	55	.130
33.	Advertisements	37	.087
34.	Other Experiences	74	.175

Racial Descent

No. 35 - 54

	Mother			Father		
Japanese	35.	33	.078	45.	23	.054
Caucasian	36.	303	.715	46.	327	.771
Chinese	37.	26	.061	47.	21	.050
Korean	38.	2	.005	48.	0	.000
Filipino	39.	22	.052	49.	22	.052
Portuguese	40.	17	.040	50.	10	.023
Negro	41.	8	.019	51.	8	.019
Samoan	42.	6	.014	52.	3	.007
Hawaiian	43.	35	.084	53.	18	.042
Other	44.	34	.080	54.	39	.092

Knowledge: Total 407

55.	None	39	.096
	Some	157	.386
	Average	68	.167
	Fairly Accurate	108	.265
	Thorough Knowledge	35	.086

Aids to Giving Knowledge of Careers

No. 36 - 63

		N	
56. **Resource Person:** Total 418	1.	86	.205
	2.	61	.146
	3.	57	.136
	4.	74	.177
	5.	53	.134
	6.	36	.086
	7.	33	.080
Mean rank 5.33	8.	15	.036
57. Interview: Total 418	1.	108	.258
	2.	94	.225
	3.	78	.187
	4.	47	.112
	5.	30	.072
	6.	32	.077
	7.	15	.036
Mean rank 5.94	8.	14	.033
58. Pamphlet or Book: Total 417	1.	53	.127
	2.	41	.098
	3.	60	.144
	4.	50	.120
	5.	67	.161
	6.	40	.096
	7.	53	.127
Mean rank 4.50	8.	53	.127
59. Employment Counselor: Total 417			
	1.	27	.065
	2.	30	.072
	3.	59	.141
	4.	63	.151
	5.	75	.180
	6.	79	.189
	7.	66	.158
Mean rank 4.27	8.	18	.043
60. Visit to Business; Total 417	1.	57	.137
	2.	76	.100
	3.	57	.137
	4.	69	.165
	5.	60	.144
	6.	52	.125
	7.	25	.060
Mean rank 5.14	8.	22	.053

61. School Counselor: Total 417	1.	20	.048
	2.	33	.079
	3.	32	.076
	4.	38	.091
	5.	45	.108
	6.	80	.192
	7.	99	.237
Mean rank 3.50	8.	70	.168
62. Observation of Someone on Job: Total 418			
	1.	57	.136
	2.	63	.151
	3.	56	.134
	4.	54	.129
	5.	50	.120
	6.	58	.139
	7.	59	.141
Mean rank 4.78	8.	2	.050
63. Talking to Other Students: Total 418			
	1.	9	.022
	2.	23	.055
	3.	16	.038
	4.	25	.060
	5.	35	.084
	6.	40	.096
	7.	68	.163
Mean rank 2.52	8.	202	.483

R-8

Primary Occupational Choices of 119* Waianae Junior Males

No. 1-3

Occupation	Number	Percent
Accountant	1	.008
Architect	1	.008
Artist		
Commercial	1	.008
Painter	1	.008
Athlete, Professional	1	.008
Baker	1	.008
Beautician	3	.025
Business Executive	3	.025
Carpenter	1	.008
Clerk, General Office	1	.008
Cook, Hotel & Restaurant	1	.008
Electrician	3	.025
Engineer		
Electrical	11	.092
Mechanical	14	.118
Laborer	4	.034
Lawyer	2	.017
Mechanic		
Airplane	1	.008
Auto	15	.126
Machinist	6	.050
Military Service	16	.134
Physical Sciences	4	.034
Physician	2	.017
Pilot, Commercial	4	.034
Policeman	2	.017
Radio Announcer	2	.017
Salesman	1	.008
Social Sciences, i.e., Anthropologist Criminologist, Historian, Sociologist	3	.025
Steward, Airplane	2	.017
Teacher, High School	4	.034
Truck Driver	2	.017
Welder	3	.025
Writer, Public Relations	3	.025

* 6 junior males expressed no primary choice

Primary Occupational Choices of 122* Waianae Junior Females

No. 1-3

Occupation	Number	Percent
Actress	1	.008
Artist		
Commercial	6	.049
Painter	1	.008
Athlete, Professional	3	.025
Beautician	16	.131
Business woman	2	.016
Clerk		
Civil Service	1	.008
General Office	5	.041
Guide, Travel & Tour	1	.008
Home Economist	2	.016
Interior Decorator	3	.025
Lawyer	1	.008
Military	1	.008
Model	2	.016
Musician	2	.016
Nun, Religious Order	1	.008
Nurse	15	.123
Physician	1	.008
Programmer	2	.016
Receptionist	2	.016
Secretary	9	.073
Social Sciences, i.e.: Anthropologist, Historian, Sociologist, Criminologist	11	.090
Stewardess	14	.115
Teacher		
Grammar	3	.025
High	6	.049
Telephone Operator	3	.025
VISTA, Peace Corps	1	.008
Writer, Public Relations	3	.025
X-ray Technician	2	.016

* 2 junior females expressed no primary choice

Second Occupational Choices of 83* Waianae Junior Males

No. 4-6

Occupation	Number	Percent
Architect	4	.048
Artist		
Commercial	1	.012
Athlete, Professional	1	.012
Business Executive	4	.048
Carpenter	2	.024
Clerk, General Office	2	.024
Draftsman	2	.024
Electrician	1	.012
Engineer		
Electrical	4	.048
Mechanical	5	.060
Laborer	1	.012
Mechanic		
Airplane	1	.012
Auto	10	.121
Machinist	4	.048
Military	21	.253
Nurse	1	.012
Photographer, Commercial	1	.012
Pilot, Commercial	2	.024
Policeman	2	.024
Social Sciences	4	.048
Teacher		
Grammar	2	.024
High School	3	.036
Truck Driver	1	.012
Welder	4	.048

*42 junior males had no second choice

Second Occupational Choices of 110* Waianae Junior Females

No. 4-6

Occupation	Number	Percent
Accountant	2	.018
Artist		
Commercial	1	.009
Painter	1	.009
Bank Teller	1	.009
Beautician	1	.009
Buyer	1	.009
Clerk		
Civil Service	2	.018
General Office	4	.036
Engineer, Mechanical	1	.009
Factory Worker	1	.009
Guide, Travel & Tour	3	.027
Interior Decorator	6	.054
Lawyer	1	.009
Librarian	1	.009
Military	8	.073
Model	1	.009
Musician	4	.036
Nun, Religious Order	1	.009
Nurse	9	.082
Nurse's Aide	1	.009
Physical Science	2	.018
Physical Therapist	1	.009
Sales Clerk	5	.045
Secretary	11	.100
Social Sciences	12	.109
Stewardess	13	.118
Teacher		
Grammar	4	.036
High	5	.045
Telephone Operator	1	.009
Translator	1	.009
VISTA, Peace Corps	1	.009

*14 junior females had no second choice

Job Qualities Listed in Order of Their Importance

No. 7,8		No. 9, 10		No. 11, 12	
01	70	01	17	01	6
02	17	02	19	02	19
03	8	03	1	03	2
04	10	04	4	04	2
05	29	05	33	05	23
06	8	06	11	06	12
07	6	07	6	07	5
08	2	08	6	08	15
09	7	09	6	09	4
10	15	10	24	10	32
11	2	11	5	11	5
12	1	12	2	12	3
13	9	13	13	13	17
14	16	14	24	14	32
15	11	15	16	15	6
16	1	16	2	16	5
17	7	17	16	17	15
18	2	18	3	18	5
19	8	19	0	19	9
20	2	20	5	20	3
21	14	21	16	21	17
22	0	22	2	22	00
23	4	23	9	23	10

No. 13, 14		No. 15, 16	
01	9	01	11
02	10	02	12
03	3	03	5
04	5	04	0
05	11	05	7
06	6	06	5
07	2	07	8
08	9	08	19
09	7	09	3
10	31	10	17
11	5	11	6
12	1	12	3
13	21	13	10
14	22	14	18
15	10	15	4
16	11	16	9
17	12	17	14
18	1	18	6
19	17	19	17
20	9	20	12
21	37	21	30
22	1	22	3
23	8	23	22

Training Necessary*
No. 17

Males (119)			Females (122)		
01	15	.126	01	8	.066
02	16	.134	02	19	.156
03	39	.328	03	42	.344
04	10	.084	04	15	.123
05	25	.210	05	25	.205
06	2	.017	06	1	.008
07	1	.008	07	5	.041
08	11	.092	08	7	.057

* 6 males and 2 females did not respond to item 17.

Confidence*
No. 18

01	31	.127
02	14	.057
03	109	.447
04	65	.266
05	27	.111

* 5 subjects did not respond to item 18.

Influences on Career Preferences

No. 19 - 34

19.	Father	88	.353
20.	Mother	102	.410
21.	Brother	31	.125
22.	Sister	20	.080
23.	Other Relative	53	.213
24.	A Teacher	38	.153
25.	A Counselor	29	.116
26.	Friends	57	.229
27.	Myself	106	.426
28.	Others	20	.080
29.	Experiences, previous work	77	.309
30.	School Courses	85	.341
31.	Reading	118	.474
32.	Hobby	42	.169
33.	Advertisements	32	.129
34.	Other Experiences	23	.092

Racial Descent

No. 35 - 54

Mother

Japanese	35.	52	.209	45.	42	.169
Caucasian	36.	50	.201	46.	49	.197
Chinese	37.	58	.233	47.	39	.157
Korean	38.	6	.024	48.	7	.028
Filipino	39.	55	.221	49.	68	.273
Portuguese	40.	24	.096	50.	37	.149
Negro	41.	0	.000	51.	3	.012
Samoan	42.	1	.004	52.	4	.016
Hawaiian	43.	98	.394	53.	72	.289
Other	44.	47	.189	54.	51	.205

Knowledge: Total 245

55.	None	24	.096
	Some	127	.510
	Average	51	.205
	Fairly Accurate	34	.137
	Thorough Knowledge	9	.036

Aids to Giving Knowledge of Careers

No. 56 - 63

56. Resource Person: Total 238	1.	60
	2.	37
	3.	34
	4.	46
	5.	16
	6.	16
	7.	15
Mean rank 5.58	8.	14
57. Interview: Total 238	1.	50
	2.	45
	3.	46
	4.	45
	5.	19
	6.	12
	7.	14
Mean rank 5.73	8.	7
58. Pamphlet or Book: Total 233	1.	13
	2.	16
	3.	23
	4.	23
	5.	31
	6.	41
	7.	45
Mean rank 3.14	8.	41
59. Employment Counselor: Total 237	1.	15
	2.	24
	3.	34
	4.	29
	5.	49
	6.	45
	7.	35
Mean rank 4.41	8.	6
60. Visit to Business: Total 237	1.	45
	2.	56
	3.	46
	4.	29
	5.	21
	6.	18
	7.	11
Mean rank 5.59	8.	11

61. School Counselor: Total 234	1.	23
	2.	18
	3.	22
	4.	25
	5.	43
	6.	38
	7.	42
Mean rank 4.10	8.	23
62. Observation of Someone on Job: Total 237	1.	30
	2.	33
	3.	23
	4.	25
	5.	36
	6.	27
	7.	40
Mean rank 4.48	8.	23
63. Talking to Other Students: Total 237	1.	5
	2.	13
	3.	10
	4.	15
	5.	20
	6.	36
	7.	31
Mean rank 2.63	8.	107

CROSS-TABULATIONS FOR KAMEHAMEHA, RADFORD, AND WAIANAE DATA

1. Racial-ethnic Groups Against----

a. Personal Influences

Caucasian: Total 322

19. Father	113	24. Teacher	32	29. Experiences, previous work	93
20. Mother	72	25. Counsellor	12	30. School courses	73
21. Brother	4	26. Friends	41	31. Reading	104
22. Sister	12	27. Myself, not influenced by others	155	32. Hobby	40
23. Other relative	18	28. Other	32	33. Advertisements	25
				34. Other	60

Chinese: Total 7

19.	3	24.	1	29.	1
20.	3	25.	0	30.	3
21.	0	26.	0	31.	3
22.	1	27.	3	32.	2
23.	0	28.	0	33.	0
				34.	0

Cosmopolitan: Total 51

19.	12	24.	4	29.	6
20.	17	25.	4	30.	19
21.	4	26.	11	31.	15
22.	7	27.	23	32.	3
23.	6	28.	4	33.	7
				34.	6

Filipino, part Filipino: Total 65

19.	27	24.	15	29.	14
20.	20	25.	8	30.	23
21.	6	26.	16	31.	31
22.	4	27.	27	32.	13
23.	12	28.	10	33.	10
				34.	4

Hawaiian, part Hawaiian: Total 455

19.	124	24.	80	29.	104
20.	154	25.	28	30.	187
21.	49	26.	90	31.	153
22.	30	27.	195	32.	57
23.	65	28.	24	33.	41
				34.	63

Japanese: Total 51

19.	10	24.	6	29.	9
20.	9	25.	2	30.	14
21.	4	26.	6	31.	21
22.	3	27.	22	32.	16
23.	9	28.	3	33.	0
				34.	8

Japanese- or Chinese-Caucasian: Total 28

19.	11	24.	3	29.	0
20.	11	25.	3	30.	7
21.	2	26.	6	31.	10
22.	0	27.	9	32.	4
23.	2	28.	0	33.	7
				34.	5

Korean: Total 5

19.	1	24.	1	29.	2
20.	3	25.	1	30.	2
21.	0	26.	0	31.	0
22.	1	27.	4	32.	0
23.	1	28.	0	33.	0
				34.	2

Negro: Total 6

19.	2	24.	2	29.	2
20.	3	25.	0	30.	1
21.	1	26.	0	31.	3
22.	1	27.	2	32.	1
23.	0	28.	0	33.	1
				34.	0

Portuguese: Total 5

19.	3	24.	0	29.	4
20.	3	25.	0	30.	1
21.	0	26.	1	31.	4
22.	1	27.	2	32.	0
23.	3	28.	0	33.	1
				34.	0

1. Racial-ethnic Groups Against---

b. Types of Careers

Caucasian: Total 322, NR 26

Accountant	1	Military	25
Actor	1	Model	3
Architect	3	Music, Instrumentalist, Singer, Teacher	7
Artist		Nurse	10
Commercial	6	Pharmacist	1
Painter	2	Photographer	4
Athlete, professional	2	Physical Sciences, i.e., Geophysicist, Mathematician, Physicist, Zoologist, etc.	25
Beautician	9	Physical Therapist	2
Bookkeeper	1	Physician	7
Business Executive	5	Pilot	6
Buyer	1	Programmer	2
Clergyman	2	Salesman	1
Clerk		Secretary	22
Civil Service	2	Social Sciences, i.e., Anthropologist, Criminologist, Historian, Sociologist, etc.	5
General Office	1	Stewardess	34
Cook, Hotel and Restaurant	1	Stock Broker	3
Dentist	1	Teacher	
Diplomat	1	Grammar	10
Draftsman	2	High	16
Engineer		Translator	2
Chemical	15	Veterinarian	2
Electrical	7	VISTA	1
Mechanical	17	Writer, Public Relations	8
Fireman	1	X-ray Technician	1
Guide, Travel & Tour	1		
Home Economist	3		
IBM Tabulating Machine Operator	2		
Interior Decorator	4		
Lawyer	5		
Lifeguard	1		
Mechanic			
Airplane	1		
Auto	1		

Cosmopolitan: Total 51, NR 8

Artist, Commercial	1
Beautician	3
Clerk	
Civil Service	1
General Office	1
Engineer, Mechanical	1
Mechanic	
Auto	1
Machinist	1
Military	3
Model	2
Musician	1
Nurse	1
Physical Sciences	1
Policeman	1
Radio Announcer	1
Salesman	1
Secretary	8
Social Sciences	1
Stewardess	6
Teacher, Grammar	2
Telephone Operator	1
Translator	1
Truck Driver	1
Veterinarian	1
Writer, Public Relations	2

Filipino: Total 65, NR 5

Athlete	3
Beautician	6
Business Executive	1
Carpenter	1
Clerk, General Office	2
Electrician	1
Engineer	
Electrical	4
Mechanical	7
Guide	1
IBM Tabulating	
Machine Operator	1
Lifeguard	3
Mechanic, atuo	5
Military	4
Nurse	2
Physician	1
Pilot	1
Social Sciences	3
Secretary	3
Stewardess	3
Teacher, High	5
Telephone Operator	1
Writer, News Editor	1
X-ray Technician	1

Hawaiian, part Hawaiian: Total 455, NR 67

Accountant	5
Actor	2
Architect	4
Artist	
Commercial	6
Painter	4
Athlete, Professional	8
Baker	1
Beautician	1
Business Executive	24
Chef	1
Chemist	2
Clerk	
Civil Service	6
General Office	3
Diplomat	1
Draftsman	2
Electrician	4
Engineer	
Electrical	16
Mechanical	30
Fireman	1
Home Economist	3
IBM Tabulating	
Machine Operator	5
Interior Decorator	4
Laborer	2
Lawyer	7
Librarian	2

(con't)

Mechanic	
Airplane	1
Auto	7
Machinist	8
Military	16
Model	1
Music	5
Nurse	11
Photographer	1
Physical Sciences	20
Physician	6
Pilot	8
Policeman	1
Programmer	6
Radio Announcer	10
Real Estate	2
Secretary	28
Social Sciences	35
Stewardess	15
Teacher	
College	1
Grammar	4
High	46
Telephone Operator	1
Translator	1
Truck Driver	2
Veterinarian	1
VISTA, Peace Corps	1
Welder	3
Writer, Public Relations	2
X-ray Technician	1

Japanese: Total 51, NR 6

Accountant	1
Artist	
Commercial	3
Painter	1
Beautician	1
Business Executive	1
Chemist	1
Clerk, General Office	1
Draftsman	2
Engineer	
Electrical	5
Mechanical	4
Interior Decorator	1
Mechanic, Machinist	1
Military	2
Model	1
Nurse	1
Physical Sciences	3
Pilot	1
Secretary	4
Social Sciences	5
Stewardess	1
Teacher	
Grammar	1
High	2
Writer, Public Relations	1
X-ray Technician	1

1. Racial-ethnic Groups Against---

c. Levels of Education

Caucasian: Total 322, NR 15

1.	On-the-job training only	24
2.	6 mos. or less in a special course	44
3.	1 to 2 yrs. in a vocational/commercial school	49
4.	1 to 2 yrs. in college	43
5.	4 yrs. of college	98
6.	1 yr. of prof./grad. educ. beyond college	4
7.	2 yrs. of prof./grad. educ. beyond college	24
8.	3 yrs. of prof./grad. educ. beyond college	21

Cosmopolitan: Total 51, NR 2

1.	7
2.	5
3.	19
4.	8
5.	9
6.	0
7.	1
8.	0

Filipino, part Filipino: Total 65, NR 63

1.	2
2.	11
3.	22
4.	6
5.	16
6.	2
7.	0
8.	4

Hawaiian, part Hawaiian: Total 455, NR 14

1.	35
2.	29
3.	102
4.	65
5.	136
6.	10
7.	43
8.	21

Japanese: Total 51, NR 2

1. 0
2. 5
3. 11
4. 3
5. 13
6. 1
7. 6
8. 10

2. Ability Groups Against Types of Careers

a. High Ability Group: Total 434, NR 35

Accountant	6	Military	19
Actor	3	Model	2
Architect	2	Music	6
Artist		Nurse	14
Commercial	6	Photographer	2
Painter	2	Physical Sciences	28
Athlete	6	Physical Therapist	2
Beautician	2	Physician	7
Business Executive	16	Pilot	7
Buyer	1	Policeman	3
Chemist	3	Radio Announcer	9
Clerk		Salesman	1
Civil Service	2	Secretary	13
General Office	2	Stewardess	29
Dentist	1	Stock Broker	1
Draftsman	2	Social Sciences	34
Engineer		Teacher	
Chemical	1	College	1
Electrical	20	Grammar	14
Mechanical	36	High	53
Home Economist	4	Translator	4
IBM Tabulating		Veterinarian	2
Machine Operator	4	VISTA	1
Interior Decorator	1	Writer, Public Relations	10
Lawyer	8	X-ray Technician	2
Librarian	2		
Mechanic			
Airplane	2		
Machinist	3		

2. Ability Groups Against Types of Careers

b. Middle Ability Group: Total 409, NR 33

Accountant	4	Mechanic	
Actor	1	Auto	14
Architect	4	Machinist	4
Artist		Military	22
Commercial	11	Model	3
Painter	3	Music	5
Athlete	5	Nurse	11
Beautician	24	Pharmacist	1
Business Executive	17	Photographer	2
Carpenter	1	Physical Sciences	17
Chef	1	Physician	4
Clergyman	1	Pilot	7
Clerk		Policeman	5
Civil Service	5	Radio Announcer	3
General Office	9	Real Estate Agent	1
Dentist	1	Secretary	49
Draftsman	2	Social Sciences	12
Electrician	4	Stewardess	33
Engineer		Stock Broker	1
Electrical	11	Teacher	
Mechanical	21	Grammar	7
Fireman	1	High	10
Guide, Travel & Tour	1	Telephone Operator	3
Home Economist	2	Truck Driver	1
IBM Tabulating		Typist	1
Machine Operator	8	Veterinarian	1
Interior Decorator	7	VISTA	2
Lawyer	5	Writer, Public Relations	5
Lifeguard	1	X-ray Technician	2

2. Ability Groups Against Types of Careers

c. Low Ability Group: Total , NR

Accountant		Mechanic	
Actor	1	Airplane	1
Architect	3	Auto	4
Artist		Machinist	3
Commercial	1	Military	8
Painter	1	Model	4
Athlete	1	Music	3
Baker	1	Nurse	8
Beautician	7	Photographer	9
Business Executive	3	Physical Sciences	3
Clergyman	1	Physician	3
Clerk		Pilot	1
Civil Service	2	Policeman	4
General Office	2	Radio Announcer	
Cook	1	Salesman	1
Draftsman	1	Seamstress	1
Electrician	2	Secretary	7
Engineer		Social Sciences	13
Electrical	11	Stewardess	14
Mechanical	13	Stock Broker	1
Guide, Travel & Tour	1	Teacher	
Home Economist	1	Grammar	2
IBM Tabulating		High	6
Machine Operator		Truck Driver	2
Interior Decorator	1	Welder	3
Laborer	3	Writer, Public Relations	
Lawyer	3	X-ray Technician	
Librarian			

3. Sex Against---

a. Types of Careers: Males Total 483, NR 54
Females Total 522, NR 46

Males

Accountant	5	Mechanic	
Actor	2	Airplane	3
Architect	10	Auto	17
Artist		Machinist	10
Commercial	3	Military Service	46
Painter	3	Music	5
Athlete, Professional	7	Nurse	3
Baker	1	Photographer	4
Beautician	3	Physical Sciences	40
Business Executive	24	Physical Therapist	1
Carpenter	1	Physician	7
Chef	2	Pilot, Commercial	17
Chemist	1	Policeman	10
Clerk		Programmer	4
Civil Service	7	Radio Announcer	3
General Office	4	Real Estate Agent	1
Cook, Hotel &		Salesman	1
Restaurant	2	Secretary	3
Court Reporter	1	Social Sciences	16
Dentist	2	Steward, Airplane	4
Draftsman	4	Stock Broker	2
Electrician	4	Teacher	
Engineer		College	1
Electrical	35	High School	19
Mechanical	57	Translator	1
Fireman	2	Truck Driver	3
IBM Tabulating		Veterinarian	2
Machine Operator	4	VISTA	1
Interior Decorator	1	Welder	3
Laborer	1	Writer,Public Relations	5
Lawyer	11		

Females

Accountant	4	Model	8
Actress	3	Musician	10
Artist		Nun, Religious Order	2
Commercial	16	Nurse	30
Painter	4	Pharmacist	1
Athlete, Professional	6	Physical Sciences	10
Beautician	29	Physical Therapist	1
Businesswoman	6	Physician	7
Buyer	1	Policewoman	3
Chemist	2	Programmer	2
Clerk		Radio Announcer	9
Civil Service	3	Receptionist	2
General Office	10	Sales	1
Diplomat	1	Seamstress	2
Draftsman	1	Secretary	64
Engineer		Social Sciences	34
Chemical	1	Stewardess	72
Electrical	1	Stock Broker	1
Mechanical	5	Teacher	
Home Economist	8	Grammar	19
IBM Tabulating		High	51
Machine Operator	4	Telephone Operator	3
Interior Decorator	10	Translator	3
Lawyer	4	Veterinarian	2
Librarian	1	VISTA, Peace Corps	2
Lifeguard	1	Writer, Public Relations	8
Military	4	X-ray Technician	4

3. Sex Against---

b. Levels of Education: Males Total 483, NR 31
Females Total 522, NR 16

Males	Females
1. 38	1. 32
2. 32	2. 69
3. 91	3. 126
4. 52	4. 77
5. 157	5. 130
6. 8	6. 9
7. 35	7. 44
8. 39	8. 19